



DEPARTMENT OF ENVIRONMENTAL QUALITY

KATHLEEN BABINEAUX BLANCO

GOVERNOR

MIKE D. McDANIEL, Ph.D.

SECRETARY

Certified Mail No.:

Agency Interest No. 2049
Activity No.: PER20030003

Mr. Otis Hall
Vice President and General Manager
BASF Corporation
P.O. Box 457 River Road
Geismar, LA 70734-0457

RE: Part 70 Operating Permit, Aniline 1 and 2 Plants, BASF Corporation, Geismar, Ascension Parish,
Louisiana

Dear Mr. Hall:

This is to inform you that the permit for the above referenced facility has been approved under LAC 33:III.501. The permit is both a state preconstruction and Part 70 Operating Permit. The submittal was approved on the basis of the emissions reported and the approval in no way guarantees the design scheme presented will be capable of controlling the emissions as to the types and quantities stated. A new application must be submitted if the reported emissions are exceeded after operations begin. The synopsis, data sheets and conditions are attached herewith.

It will be considered a violation of the permit if all proposed control measures and/or equipment are not installed and properly operated and maintained as specified in the application.

Operation of this facility is hereby authorized under the terms and conditions of this permit. This authorization shall expire at midnight on the _____ of _____, 2011, unless a timely and complete renewal application has been submitted six months prior to expiration. Terms and conditions of this permit shall remain in effect until such time as the permitting authority takes final action on the application for permit renewal. The permit number and Agency Interest No. cited above should be referenced in future correspondence regarding this facility.

Done this _____ day of _____, 2006.

Permit No.: 2558-V1

Sincerely,

Chuck Carr Brown, Ph.D.
Assistant Secretary

CCB:FJH
cc: EPA Region VI

ENVIRONMENTAL SERVICES

: PO BOX 4313, BATON ROUGE, LA 70821-4313

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**AIR PERMIT BRIEFING SHEET
AIR QUALITY DIVISION
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**ANILINE 1 and 2 PLANTS
BASF CORPORATION, AI NO. 2049
GEISMAR, ASCENSION PARISH, LOUISIANA**

I. BACKGROUND

BASF Corporation operates Geismar Site, a chemical manufacturing complex, on the east bank of the Mississippi River between I-10 and Hwy 75. Plants on site produce amine compounds, aniline, butyrolactone (BLO), 1,4-butanediol (1,4-BD), ethylene oxide/ethylene glycol (EO/EG), glyoxal, methylene bis-phenylisocyanate (MDI), n-methyl pyrrolidone (NMP), polyols, toluene diisocyanate (TDI), tetrahydrofuran/polytetrahydrofuran (THF/PolyTHF), and vinylpyrrolidone/polyvinylpyrrolidone (NVP/PVP). The company also produces steam and electricity for internal use and treats wastewater from the plants on site. Currently, the Aniline 1 Plant operates under Permit No. 2044-M1 dated June 15, 2001 and the Aniline 2 Plant operates under Permit No. 2558-V0 dated August 21, 1998.

I. ORIGIN

A permit application and Emission Inventory Questionnaire dated February 24, 2003, were submitted requesting a permit renewal. Also a revised application was submitted on March 29, 2006.

III. DESCRIPTION

The Aniline 1 and 2 Plants consist of production facilities that produce mononitrobenzene (MNB) as an intermediate and aniline as a finished product.

Mononitrobenzene

Mononitrobenzene (MNB) is produced by the reaction of benzene and nitric acid in a solution of sulfuric acid under adiabatic conditions using a large volume of sulfuric acid that acts as a heat sink. This heat is used to vaporize and drive off the water formed during the reaction and thereby reconcentrate the sulfuric acid. After reaction, the organic and acid phases are separated. Acid phase is flash evaporated to remove the reaction water and then the acid is recycled. The MNB is water/caustic washed to neutralize acid and remove impurities. Washed crude nitrobenzene is then fractionated to remove the benzene and water before it is sent to storage to be used as feedstock for producing aniline.

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Aniline Process

Aniline is produced in this process by reacting MNB with hydrogen in a fluidized bed of copper on silicon oxide catalyst. The MNB is used as an extraction solvent to recover aniline from the plant wastewater before it is preheated and fed to fluidized bed reactor. The MNB is completely consumed in the reaction, which forms aniline and water and generates considerable heat. A heat exchanger bundle that is submerged in the fluidized bed of the reactor removes the heat, which is used to produce steam for the Aniline and MNB Plants.

The aniline and water are condensed and separated into an organic and aqueous phase. The aniline in the water phase is extracted by the feed MNB. The organic phase, crude aniline, is distilled to first remove the water and then the heavy ends residual.

The proposed modifications are as follows:

1. Reconcile emission rates for the two existing Aniline Plant Flares (Emission Points 14-90 and 36-97) and Aniline Plant 1 Fugitives (Emission Point 15-90);
2. Revise emission calculations for the Aniline Plant Incinerator (Emission Point 12-90);
3. Add a flare, Emission Point ANI02, previously approved under an authorization-to-construct;
4. Add a cooling tower, Emission Point ANI03, previously approved as a case-by-case insignificant activity; and
5. Delete Emission Point 37-97, Aniline Wastewater Tank.

Estimated emissions in tons per year are as follows:

<u>Pollutant</u>	<u>Emissions</u>		
	<u>Before*</u>	<u>After</u>	<u>Change</u>
PM ₁₀	11.96	7.43	-4.53
SO ₂	0.03	0.03	-
NO _x	40.73	39.43	-1.30
CO	20.85	18.06	-2.79
VOC	10.19	7.20	-2.99

* Including emissions from Permit Nos. 2044-M1 and 2558-V0

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VOC LAC 33:III Chapter 51 Toxic Air Pollutants (TAPs):

<u>Pollutant</u>	<u>Before</u>	<u>After</u>	<u>Change</u>
Ammonia	1.07	0.12	-0.95
Aniline	2.78	2.49	-0.29
Benzene	2.49	1.81	-0.68
Chlorine	-	0.07	+0.07
Formaldehyde	-	0.02	+0.02
n-Hexane	-	0.09	+0.09
Hydrochloric Acid	0.06	0.07	+0.01
Mononitrobenzene	1.09	0.56	-0.53
Nitric Acid	0.001	<0.01	-
Sulfuric Acid	<0.01	<0.01	-

IV. TYPE OF REVIEW

This permit was reviewed for compliance with 40 CFR 70, the Louisiana Air Quality Regulations, New Source Performance Standards (NSPS), and NESHAP. Prevention of Significant Deterioration does not apply.

V. Credible Evidence

Notwithstanding any other provisions of any applicable rule or regulation or requirement of this permit that state specific methods that may be used to assess compliance with applicable requirements, pursuant to 40 CFR Part 70 and EPA's Credible Evidence Rule, 62 Fed. Reg. 8314 (Feb. 24, 1997), any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed shall be considered for purposes of Title V compliance certifications. Furthermore, for purposes of establishing whether or not a person has violated or is in violation of any emissions limitation or standard or permit condition, nothing in this permit shall preclude the use, including the exclusive use, by any person of any such credible evidence or information.

VI. PUBLIC NOTICE

A notice requesting public comment on the permit was published in The Advocate, Baton

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Rouge, on XX, 2006, and in the Plaquemine Post/South, Plaquemine, on XX, 2006, and submitted to the Iberville Parish Library, East Iberville Branch, on XX, 2006. A copy of the public notice was mailed to concerned citizens listed in the Office of Environmental Services Public Notice Mailing List on XX, 2006. The draft permit was also submitted to US EPA Region VI on XX, 2006. All comments will be considered prior to the final permit decision.

PART 70 SPECIFIC CONDITIONS

ANILINE 1 and 2 PLANTS BASF CORPORATION, AI NO. 2049 GEISMAR, ASCENSION PARISH, LOUISIANA

This permit is issued under the following conditions:

The permittee shall comply with all applicable federally enforceable requirements listed in the attached tables. Failure to comply with any of the federal applicable requirements or compliance monitoring devices, activities, or methods listed in Tables 1, 2, 3, and 4 will represent a violation of this permit.

1. Permittee shall comply with a streamlined equipment leaks monitoring program. Compliance with the streamlined program in accordance with this specific condition shall serve to comply with each of the applicable fugitive emission monitoring programs being streamlined, as indicated in the following table. Noncompliance with the streamlined program in accordance with this specific condition may subject the permittee to enforcement action for one or more of the applicable fugitive emissions programs.
 - A. Permittee shall apply the streamlined program to the combined universe of components subject to any of the programs being streamlined. Any component type which does not require periodic monitoring under the overall most stringent program (HON) shall be monitored as required by the most stringent requirements of any other program being streamlined and will not be exempted. The streamlined program will include any exemptions based on size of component available in any of the programs being streamlined.
 - B. Permittee shall use leak definitions and monitoring frequency based on the overall most stringent program. Percent leaker performance shall be calculated using the provisions of the overall most stringent program. Annual monitoring shall be defined as once every four quarters. Some allowance may be made in the first year of the streamlined program in order to allow for transition from existing monitoring schedules.
 - C. Permittee shall comply with recordkeeping and reporting requirements of the overall most stringent program. Semiannual reports shall be submitted on July 31st and January 31st, to cover the periods January 1st through June 30th and July 1st through December 31st, respectively. The semiannual reports shall include any monitoring performed within the reporting period.

PART 70 SPECIFIC CONDITIONS

**ANILINE 1 and 2 PLANTS
BASF CORPORATION, AI NO. 2049
GEISMAR, ASCENSION PARISH, LOUISIANA**

FACILITY	PROGRAMS STREAMLINED	STREAM APPLICABILITY	OVERALL MOST STRINGENT PROGRAM
Aniline 1 and 2	40 CFR 63, Subpart H-HON LAC 33:III.5109 LAC 33:III.2122 NESHAP Subpart J and V NSPS Subpart VV	5% VHAP 5% Class I and II 10% VOC 10% VHAP 10% VOC	40 CFR 63, Subpart H-HON

**STATE ONLY SPECIFIC CONDITIONS
AIR PERMIT BRIEFING SHEET**

**ANILINE 1 and 2 PLANTS
BASF CORPORATION, AI NO. 2049
GEISMAR, ASCENSION PARISH, LOUISIANA**

Failure to comply with the following conditions and any of the state's applicable requirements listed in Table 1, 2, 3, and 4 will represent a violation of this permit.

40 CFR PART 70 GENERAL CONDITIONS

- A. The term of this permit shall be five (5) years from date of issuance. An application for a renewal of this 40 CFR Part 70 permit shall be submitted to the administrative authority no later than six months prior to the permit expiration date. Should a complete permit application not be submitted six months prior to the permit expiration date, a facility's right to operate is terminated pursuant to 40 CFR Section 70.7(c)(ii). Operation may continue under the conditions of this permit during the period of the review of the application for renewal. [LAC 33:III.507.E.1, E.3, E.4, reference 40 CFR 70.6(a)(2)]
- B. The conditions of this permit are severable; and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby. [Reference 40 CFR 70.6(a)(5)]
- C. Permittee shall comply with all conditions of the 40 CFR Part 70 permit. Any permit noncompliance constitutes a violation of the Clean Air Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. [LAC 33:III.507.B.2, reference 40 CFR 70.6(a)(6)(i) & (iii)]
- D. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. [Reference 40 CFR 70.6(a)(6)(ii)]
- E. This permit does not convey any property rights of any sort, or an exclusive privilege. [Reference 40 CFR 70.6(a)(6)(iv)]
- F. The permittee shall furnish to the permitting authority, within a reasonable time, any information that the permitting authority may request in writing to determine whether cause exists for modifying, revoking, and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the permitting authority copies of records required to be kept by the permit or, for information claimed to be confidential, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality. A claim of confidentiality does not relieve the permittee of the requirement to provide the information. [LAC 33:III.507.B.2, 517.F, reference 40 CFR 70.6(a)(6)(v)]
- G. Permittee shall pay fees in accordance with LAC 33:III.Chapter 2 and 40 CFR Section 70.6(a)(7). [LAC 33:III.501.C.2, reference 40 CFR 70.6(a)(7)]

40 CFR PART 70 GENERAL CONDITIONS

- H. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the permitting authority or authorized representative to perform the following:
1. enter upon the permittee's premises where a 40 CFR Part 70 source is located or emission-related activity is conducted, or where records must be kept under the conditions of the permit [LAC 33:III.507.H.2, reference 40 CFR 70.6(c)(2)(i)];
 2. have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit [LAC 33:III.507.H.2, reference 40 CFR 70.6(c)(2)(ii)];
 3. inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit [LAC 33:III.507.H.2, reference 40 CFR 70.6(c)(2)(iii)]; and
 4. as authorized by the Clean Air Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements. [LAC 33:III.507.H.2, reference 40 CFR 70.6(c)(2)(iv)]
- I. All required monitoring data and supporting information shall be kept available for inspection at the facility or alternate location approved by the agency for a period of at least five (5) years from the date of the monitoring sample, measurement, report, or application. Supporting information includes calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and all reports required by the permit.
[Reference 40 CFR 70.6(a)(3)(ii)(B)]
- J. Records of required monitoring shall include the following:
1. the date, place as defined in the permit, and time of sampling or measurements;
 2. the date(s) analyses were performed;
 3. the company or entity that performed the analyses;
 4. the analytical techniques or methods used;
 5. the results of such analyses; and
 6. the operating conditions as existing at the time of sampling or measurement.
[Reference 40 CFR 70.6(a)(3)(ii)(A)]
- K. Permittee shall submit at least semiannually, reports of any required monitoring, clearly identifying all instances of deviations from permitted monitoring requirements, certified by a responsible company official. For previously reported deviations, in lieu of attaching the individual deviation reports, the semiannual report may clearly reference the communication(s)/correspondence(s) constituting the prior report, including the date the prior report was submitted. The semiannual reports shall be submitted to the Office of Environmental Compliance, Surveillance Division by March 31 for the preceding period encompassing July through December and September 30 for the preceding period encompassing January through June. Any quarterly deviation report required to be submitted by March 31 or September 30 in accordance with Part 70 General Condition R may be consolidated with the semi-annual reports required by this general condition as long as the report clearly indicates this and all required information is included and clearly delineated in the consolidated report. [LAC 33:III.507.H, reference 40 CFR 70.6(a)(3)(iii)(A)]

40 CFR PART 70 GENERAL CONDITIONS

- L. The permittee shall submit at least semiannual reports on the status of compliance pursuant to 40 CFR Section 70.5 (c) (8) and a progress report on any applicable schedule of compliance pursuant to 40 CFR Section 70.6 (c) (4). [LAC 33:III.507.H.1, reference 40 CFR 70.6(c)(4)]
- M. Compliance certifications per LAC 33:III.507.H.5 shall be submitted to the Administrator as well as the permitting authority. For previously reported compliance deviations, in lieu of attaching the individual deviation reports, the annual report may clearly reference the communication(s)/correspondence(s) constituting the prior report, including the date the prior report was submitted. The compliance certifications shall be submitted to the Office of Environmental Compliance, Surveillance Division by March 31 for the preceding calendar year. [LAC 33:III.507.H.5, reference 40 CFR 70.6(c)(5)(iv)]
- N. If the permittee seeks to reserve a claim of an affirmative defense as provided in LAC 33:III.507.J.2, the permittee shall, in addition to any emergency or upset provisions in any applicable regulation, notify the permitting authority within 2 working days of the time when emission limitations were exceeded due to the occurrence of an upset. In the event of an upset, as defined under LAC 33:III.507.J, which results in excess emissions, the permittee shall demonstrate through properly signed, contemporaneous operating logs, or other relevant evidence that: 1) an emergency occurred and the cause was identified; 2) the permitted facility was being operated properly at the time; and 3) during the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standard or requirement of the permit. [LAC 33:III.507.J.2, reference 40 CFR 70.6(g)(3)(iv) & (i-iii)]
- O. Permittee shall maintain emissions at a level less than or equal to that provided for under the allowances that the 40 CFR Part 70 source lawfully holds under Title IV of the Clean Air Act or the regulations promulgated thereunder. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid rain program, provided that such increases do not require a permit revision under any other applicable requirement. No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement. Any such allowance shall be accounted for according to the procedures established in regulations promulgated under Title IV of the Clean Air Act. [Reference 40 CFR 70.6(a)(4)]
- P. Any permit issued pursuant to 40 CFR Part 70 may be subject to reopening prior to the expiration of the permit for any of the conditions specified in 40 CFR Section 70.7(f) or LAC 33:III.529. [LAC 33:III.529.A-B, reference 40 CFR 70.7(f)]
- Q. Permittee may request an administrative amendment to the permit to incorporate test results from compliance testing if the following criteria are met:
1. the changes are a result of tests performed upon start-up of newly constructed, installed, or modified equipment or operations;
 2. increases in permitted emissions will not exceed five tons per year for any regulated pollutant;
 3. increases in permitted emissions of Louisiana toxic air pollutants or of federal hazardous air pollutants would not constitute a modification under LAC 33:III. Chapter 51 or under Section 112 (g) of the Clean Air Act;

40 CFR PART 70 GENERAL CONDITIONS

4. changes in emissions would not require new source review for prevention of significant deterioration or nonattainment and would not trigger the applicability of any federally applicable requirement;
 5. changes in emissions would not qualify as a significant modification; and
 6. the request is submitted no later than 12 months after commencing operation. [LAC 33:III.523.A, reference 40 CFR 70.7(d)]
- R. Permittee shall submit prompt reports of all permit deviations as specified below to the Office of Environmental Compliance, Surveillance Division. All such reports shall be certified by a responsible official in accordance with 40 CFR 70.5(d).
1. A written report shall be submitted within 7 days of any emission in excess of permit requirements by an amount greater than the Reportable Quantity established for that pollutant in LAC 33.I.Chapter 39.
 2. A written report shall be submitted within 7 days of the initial occurrence of any emission in excess of permit requirements, regardless of the amount, where such emission occurs over a period of seven days or longer.
 3. A written report shall be submitted quarterly to address all permit deviations not included in paragraphs 1 or 2 above. Unless required by an applicable reporting requirement, a written report is not required during periods in which there is no deviation. The quarterly deviation reports submitted on March 31 and September 30 may be consolidated with the semi-annual reports required by Part 70 General Condition K as long as the report clearly indicates this and all required information is included and clearly delineated in the consolidated report. For previously reported permit deviations, in lieu of attaching the individual deviation reports, the quarterly report may clearly reference the communication(s)/correspondence(s) constituting the prior report, including the date the prior report was submitted. The schedule for submittal of quarterly reports shall be no later than the dates specified below for any permit deviations occurring during the corresponding specified calendar quarter:
 - a. Report by June 30 to cover January through March
 - b. Report by September 30 to cover April through June
 - c. Report by December 31 to cover July through September
 - d. Report by March 31 to cover October through December
 4. Any written report submitted in advance of the timeframes specified above, in accordance with an applicable regulation, may serve to meet the reporting requirements of this condition provided such reports are certified in accordance with 40 CFR 70.5(d) and contain all information relevant to the permit deviation. Reporting under this condition does not relieve the permittee from the reporting requirements of any applicable regulation, including LAC 33.I.Chapter 39, LAC 33.III.Chapter 9, and LAC 33.III.5107. [Reference 40 CFR 70.6(a)(3)(iii)(B)]

40 CFR PART 70 GENERAL CONDITIONS

- S. Permittee shall continue to comply with applicable requirements on a timely basis, and will meet on a timely basis applicable requirements that become effective during the permit term. [Reference 40 CFR 70.5(c)(8)(iii)]
- T. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
1. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156;
 2. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158;
 3. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161;
 4. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with recordkeeping requirements pursuant to 40 CFR 82.166. ("MVAC-like appliance" as defined at 40 CFR 82.152);
 5. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to 40 CFR 82.156; and
 6. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166. [Reference 40 CFR 82, Subpart F]
- U. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant. [Reference 40 CFR 82, Subpart B]

- V. Data availability for continuous monitoring or monitoring to collect data at specific intervals: Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including calibration checks and required zero and span adjustments), the permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the emissions unit is operating. For purposes of reporting monitoring deviations under Part 70 General Conditions K and R, and unless otherwise provided for in the Specific Requirements (or Table 3) of this permit, the minimum degree of data availability shall be at least 90% (based on a monthly average) of the operating time of the emissions unit or activity being monitored. This condition does not apply to Leak Detection and Repair (LDAR) programs for fugitive emissions (e.g., 40 CFR 60 Subpart VV, 40 CFR 63 Subpart H).

**LOUISIANA AIR EMISSION PERMIT
GENERAL CONDITIONS**

- I. This permit is issued on the basis of the emissions reported in the application for approval of emissions and in no way guarantees that the design scheme presented will be capable of controlling the emissions to the type and quantities stated. Failure to install, properly operate and/or maintain all proposed control measures and/or equipment as specified in the application and supplemental information shall be considered a violation of the permit and LAC 33:III.501. If the emissions are determined to be greater than those allowed by the permit (e.g. during the shakedown period for new or modified equipment) or if proposed control measures and/or equipment are not installed or do not perform according to design efficiency, an application to modify the permit must be submitted. All terms and conditions of this permit shall remain in effect unless and until revised by the permitting authority.
- II. The permittee is subject to all applicable provisions of the Louisiana Air Quality Regulations. Violation of the terms and conditions of the permit constitutes a violation of these regulations.
- III. The Emission Rates for Criteria Pollutants, Emission Rates for TAP/HAP & Other Pollutants, and Specific Requirements sections or, where included, Emission Inventory Questionnaire sheets establish the emission limitations and are a part of the permit. Any operating limitations are noted in the Specific Requirements or, where included, Tables 2 and 3 of the permit. The synopsis is based on the application and Emission Inventory Questionnaire dated February 24, 2003. Also a revised application was submitted on March 29, 2006.
- IV. This permit shall become invalid, for the sources not constructed, if:
 - A. Construction is not commenced, or binding agreements or contractual obligations to undertake a program of construction of the project are not entered into, within two (2) years (18 months for PSD permits) after issuance of this permit, or;
 - B. If construction is discontinued for a period of two (2) years (18 months for PSD permits) or more.

The administrative authority may extend this time period upon a satisfactory showing that an extension is justified.

This provision does not apply to the time period between construction of the approved phases of a phased construction project. However, each phase must commence construction within two (2) years (18 months for PSD permits) of its projected and approved commencement date.
- V. The permittee shall submit semiannual reports of progress outlining the status of construction, noting any design changes, modifications or alterations in the construction schedule which have or may have an effect on the emission rates or ambient air quality levels. These reports shall continue to be submitted until such time as construction is certified as being complete. Furthermore, for any significant change in the design, prior approval shall be obtained from the Office of Environmental Services, Air Permits Division.
- VI. The permittee shall notify the Department of Environmental Quality, Office of Environmental Services, Air Permits Division within ten (10) calendar days from the date that construction is certified as complete and the estimated date of start-up of operation. The appropriate Regional Office shall also be so notified within the same time frame.

**LOUISIANA AIR EMISSION PERMIT
GENERAL CONDITIONS**

- VII. Any emissions testing performed for purposes of demonstrating compliance with the limitations set forth in paragraph III shall be conducted in accordance with the methods described in the Specific Conditions and, where included, Tables 1, 2, 3, 4, and 5 of this permit. Any deviation from or modification of the methods used for testing shall have prior approval from the Office of Environmental Assessment, Air Quality Assessment Division.
- VIII. The emission testing described in paragraph VII above, or established in the specific conditions of this permit, shall be conducted within sixty (60) days after achieving normal production rate or after the end of the shakedown period, but in no event later than 180 days after initial start-up (or restart-up after modification). The Office of Environmental Assessment, Air Quality Assessment Division shall be notified at least (30) days prior to testing and shall be given the opportunity to conduct a pretest meeting and observe the emission testing. The test results shall be submitted to the Air Quality Assessment Division within sixty (60) days after the complete testing. As required by LAC 33:III.913, the permittee shall provide necessary sampling ports in stacks or ducts and such other safe and proper sampling and testing facilities for proper determination of the emission limits.
- IX. The permittee shall, within 180 days after start-up and shakedown of each project or unit, report to the Office of Environmental Compliance, Surveillance Division any significant difference in operating emission rates as compared to those limitations specified in paragraph III. This report shall also include, but not be limited to, malfunctions and upsets. A permit modification shall be submitted, if necessary, as required in Condition I.
- X. The permittee shall retain records of all information resulting from monitoring activities and information indicating operating parameters as specified in the specific conditions of this permit for a minimum of at least five (5) years.
- XI. If for any reason the permittee does not comply with, or will not be able to comply with, the emission limitations specified in this permit, the permittee shall provide the Office of Environmental Compliance, Surveillance Division with a written report as specified below.
- A. A written report shall be submitted within 7 days of any emission in excess of permit requirements by an amount greater than the Reportable Quantity established for that pollutant in LAC 33.I.Chapter 39.
 - B. A written report shall be submitted within 7 days of the initial occurrence of any emission in excess of permit requirements, regardless of the amount, where such emission occurs over a period of seven days or longer.
 - C. A written report shall be submitted quarterly to address all emission limitation exceedances not included in paragraphs A or B above. The schedule for submittal of quarterly reports shall be no later than the dates specified below for any emission limitation exceedances occurring during the corresponding specified calendar quarter:
 - 1. Report by June 30 to cover January through March
 - 2. Report by September 30 to cover April through June
 - 3. Report by December 31 to cover July through September
 - 4. Report by March 31 to cover October through December

**LOUISIANA AIR EMISSION PERMIT
GENERAL CONDITIONS**

- D. Each report submitted in accordance with this condition shall contain the following information:
1. Description of noncomplying emission(s);
 2. Cause of noncompliance;
 3. Anticipated time the noncompliance is expected to continue, or if corrected, the duration of the period of noncompliance;
 4. Steps taken by the permittee to reduce and eliminate the noncomplying emissions; and
 5. Steps taken by the permittee to prevent recurrences of the noncomplying emissions.
- E. Any written report submitted in advance of the timeframes specified above, in accordance with an applicable regulation, may serve to meet the reporting requirements of this condition provided all information specified above is included. For Part 70 sources, reports submitted in accordance with Part 70 General Condition R shall serve to meet the requirements of this condition provided all specified information is included. Reporting under this condition does not relieve the permittee from the reporting requirements of any applicable regulation, including LAC 33.I.Chapter 39, LAC 33.III.Chapter 9, and LAC 33.III.5107.
- XII. Permittee shall allow the authorized officers and employees of the Department of Environmental Quality, at all reasonable times and upon presentation of identification, to:
- A. Enter upon the permittee's premises where regulated facilities are located, regulated activities are conducted or where records required under this permit are kept;
 - B. Have access to and copy any records that are required to be kept under the terms and conditions of this permit, the Louisiana Air Quality Regulations, or the Act;
 - C. Inspect any facilities, equipment (including monitoring methods and an operation and maintenance inspection), or operations regulated under this permit; and
 - D. Sample or monitor, for the purpose of assuring compliance with this permit or as otherwise authorized by the Act or regulations adopted thereunder, any substances or parameters at any location.
- XIII. If samples are taken under Section XII.D. above, the officer or employee obtaining such samples shall give the owner, operator or agent in charge a receipt describing the sample obtained. If requested prior to leaving the premises, a portion of each sample equal in volume or weight to the portion retained shall be given to the owner, operator or agent in charge. If an analysis is made of such samples, a copy of the analysis shall be furnished promptly to the owner, operator or agency in charge.
- XIV. The permittee shall allow authorized officers and employees of the Department of Environmental Quality, upon presentation of identification, to enter upon the permittee's premises to investigate potential or alleged violations of the Act or the rules and regulations adopted thereunder. In such investigations, the permittee shall be notified at the time entrance is requested of the nature of the suspected violation. Inspections under this subsection shall be limited to the aspects of alleged violations. However, this shall not in any way preclude prosecution of all violations found.
- XV. The permittee shall comply with the reporting requirements specified under LAC 33:III.919 as well as notification requirements specified under LAC 33:III.927.

**LOUISIANA AIR EMISSION PERMIT
GENERAL CONDITIONS**

XVI. In the event of any change in ownership of the source described in this permit, the permittee and the succeeding owner shall notify the Office of Environmental Services, Air Permits Division, within ninety (90) days after the event, to amend this permit.

XVII. Very small emissions to the air resulting from routine operations, that are predictable, expected, periodic, and quantifiable and that are submitted by the permitted facility and approved by the Air Permits Division are considered authorized discharges. Approved activities are noted in the General Condition XVII Activities List of this permit. To be approved as an authorized discharge, these very small releases must:

1. Generally be less than 5 TPY
2. Be less than the minimum emission rate (MER)
3. Be scheduled daily, weekly, monthly, etc., or
4. Be necessary prior to plant startup or after shutdown [line or compressor pressuring/depressuring for example]

These releases are not included in the permit totals because they are small and will have an insignificant impact on air quality. This general condition does not authorize the maintenance of a nuisance, or a danger to public health and safety. The permitted facility must comply with all applicable requirements, including release reporting under LAC 33:I.3901.

XVIII. Provisions of this permit may be appealed in writing pursuant to La. R.S. 30:2024(A) within 30 days from receipt of the permit. Only those provisions specifically appealed will be suspended by a request for hearing, unless the secretary or the assistant secretary elects to suspend other provisions as well. Construction cannot proceed except as specifically approved by the secretary or assistant secretary. A request for hearing must be sent to the following:

Attention: Office of the Secretary, Legal Services Division
La. Dept. of Environmental Quality
Post Office Box 4302
Baton Rouge, Louisiana 70821-4302

XIX. Certain Part 70 general conditions may duplicate or conflict with state general conditions. To the extent that any Part 70 conditions conflict with state general conditions, then the Part 70 general conditions control. To the extent that any Part 70 general conditions duplicate any state general conditions, then such state and Part 70 provisions will be enforced as if there is only one condition rather than two conditions.

ANILINE 1 and 2 PLANTS
 BASF CORPORATION, AI NO. 2049
 GEISMAR, ASCENSION PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REGULATIONS

EMISSION SOURCE	APPLICABLE REQUIREMENT	COMPLIANCE METHOD/PROVISION	NOTES
10-90 Aniline Plant Nitric Acid Scrubber Vent	Comprehensive Toxic Air Pollutant Emission Control Program – Emission Control and Reduction Requirements and Standards (LAC 33:III.5109) – STATE ONLY –	Class III TAP. MACT is not required. Must comply with the Ambient Air Standard (AAS).	
10-90(a) TK-511A Nitric Acid Tank Vents through Emission Source 10-90.	Comprehensive Toxic Air Pollutant Emission Control Program – Emission Control and Reduction Requirements and Standards (LAC 33:III.5109) – STATE ONLY –	Class III TAP. MACT is not required. Must comply with the AAS.	
10-90(b) Tank Depressurization Vents through Emission Source 10-90.	Comprehensive Toxic Air Pollutant Emission Control Program – Emission Control and Reduction Requirements and Standards (LAC 33:III.5109) – STATE ONLY –	Class III TAP. MACT is not required. Must comply with the AAS.	
11-90 Aniline Plant Sulfuric Acid Storage/Unloading Vent	Comprehensive Toxic Air Pollutant Emission Control Program – Emission Control and Reduction Requirements and Standards (LAC 33:III.5109) – STATE ONLY –	Class III TAP. MACT is not required. Must comply with the AAS.	TK-512 Sulfuric Acid Storage Tank
12-90 Aniline Plant Incinerator (Y500)	Control of Air Pollution from Smoke (LAC 33:III.1101) Emission Standards for Particulate Matter – Emission Limits (LAC 33:III.1311.B) Emission Standards for Particulate Matter – Emission Limits (LAC 33:III.1311.C) Emission Limitations for Sulfur Dioxide (LAC 33:III.1503.C)	Smoke from incinerator stack shall be controlled so that the shade of the emission is not darker than 20% average opacity for more than one 6-minute period in any 60 consecutive minutes. DOES NOT APPLY. The incinerator combusts liquid and gaseous fuels only. Liquid and gaseous fuels are not included in definition of “Process Weight”. See LAC 33:III.111. The opacity of emissions will be not darker than 20% average opacity for more than one 6-minute period in any 60 consecutive minutes. EXEMPT. Emissions of sulfur dioxide are kept below 2,000 ppmv.	Unit emits <250 tpy of sulfur compounds.

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TABLE 2: STATE AND FEDERAL AIR QUALITY REGULATIONS

EMISSION SOURCE	APPLICABLE REQUIREMENT	COMPLIANCE METHOD/PROVISION	NOTES
12-90 Aniline Plant Incinerator (Y500) (continued)	Limiting VOC Emissions from Reactor Processes and Distillation Operations (LAC 33:III.2147)	EXEMPT. Reactor and distillation processes subject to the HON are exempt from LAC 33:III.2147 according to 2147.A.2.g.	
	Comprehensive Toxic Air Pollutant Emission Control Program – Emission Control and Reduction Requirements and Standards (LAC 33:III.5109) – STATE ONLY –	This source emits air toxics for which total facility-wide emissions exceed the MER. The incinerator maintains a ≥98% destruction efficiency of VOCs. Therefore, the unit meets the SOCOMI MACT.	
	NSPS Subpart NNN – SOCOMI Distillation Operations (40 CFR 60.660)	EXEMPT. Per 63.110(d)(4), HON Subpart G Group 1 process vents that overlap applicability with NSPS Subpart NNN need only comply with HON Subpart G.	
	NSPS Subpart RRR – SOCOMI Distillation Operations (40 CFR 60.700)	EXEMPT. Per 63.110(d)(7), HON Subpart G Group 1 process vents that overlap applicability with NSPS Subpart RRR need only comply with HON Subpart G.	
	NESHAP Subpart Y – Benzene Storage Vessels (40 CFR 61.270)	EXEMPT. Per 63.110(b)(2), HON Subpart G tank that overlap applicability with NSPS Subpart Y need only comply with HON Subpart G. This storage tank complies with 40 CFR 63.119.	
	Hazardous Organic NESHAP Subparts F and G – Process Vent Provisions – Reference Control Technology (40 CFR 63.113, 114, and 119)	The incinerator meets the control device requirements as outlined in 40 CFR 63.113, §63.114(a)(1), and §63.119.	
	Hazardous Organic NESHAP Subparts F and G – Process Wastewater Provisions – Wastewater Tanks (40 CFR 63.133)	The incinerator meets the control device requirements as outlined in 40 CFR 63.133.	
	Hazardous Organic NESHAP Subpart EEE – Hazardous Waste Combustors (40 CFR 63.1200)	The incinerator meets the emission limit requirements as outlined in 40 CFR 63.1203.	

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TABLE 2: STATE AND FEDERAL AIR QUALITY REGULATIONS

EMISSION SOURCE	APPLICABLE REQUIREMENT	COMPLIANCE METHOD/PROVISION	NOTES
12-90(a) TK-510A Benzene Tank	Storage of Volatile Organic Liquids (LAC 33:III.2103)	The storage tank is equipped with submerged fill pipe and the emissions are vented to the incinerator, which maintains a >98% destruction efficiency of VOCs.	
Vents through Emission Source 12-90.	Comprehensive Toxic Air Pollutant Emission Control Program – Emission Control and Reduction Requirements and Standards (LAC 33:III.5109) – STATE ONLY –	These sources emit an air toxic for which total facility-wide emissions exceed the MER. Therefore, the sources will be controlled as required in the SOCM I MACT.	
	NPS Subpart Kb – Volatile Organic Liquid Storage (40 CFR 60.110b)	EXEMPT. Per 63.110(b)(1), HON Subpart G tank that overlap applicability with NPS Subpart Kb need only comply with HON Subpart G. This storage tank complies with 40 CFR 63.119.	
	NESHAP Subpart Y – Benzene Storage Vessels (40 CFR 61.270)	EXEMPT. Per 63.110(b)(2), HON Subpart G tank that overlap applicability with NPS Subpart Y need only comply with HON Subpart G. This storage tank complies with 40 CFR 63.119.	
	Hazardous Organic NESHAP Subparts F and G – Storage Vessel Provisions (40 CFR 63.119)	Emissions from tank are routed through a closed vent system to the incinerator in accordance with 40 CFR 63.119.	HON Group 1 Storage Vessels.
12-90(b-f) TK-514C Aniline Tank, TK-513 Nitrobenzene Tank, TK-514A Aniline Tank, TK-514B Aniline Tank, TK-516 Nitrobenzene Tank	Storage of Volatile Organic Liquids (LAC 33:III.2103)	EXEMPT. The vapor pressure of the stored material is <1.5 psia.	
Vent through Emission Source 12-90.	Comprehensive Toxic Air Pollutant Emission Control Program – Emission Control and Reduction Requirements and Standards (LAC 33:III.5109) – STATE ONLY –	These sources emit air toxics for which total facility-wide emissions exceed the MER. Therefore, the sources will be controlled as required in the SOCM I MACT.	
	NPS Subpart Kb – Volatile Organic Liquid Storage (40 CFR 60.110b)	EXEMPT. Per 63.110(b)(1), HON Subpart G tanks that overlap applicability with NPS Subpart Kb need only comply with HON Subpart G. Group 2 storage vessels; No control requirements. These storage tanks comply with 40 CFR 63.119.	
	Hazardous Organic NESHAP Subparts F and G – Storage Vessel Provisions (40 CFR 63.119)	Each tank stores an OHAP, but they are Group 2 storage vessels per Table 5 of 40 CFR 63, Subpart G. No control requirements apply; however, recordkeeping provisions are applicable per 40 CFR 63.123.	HON Group 2 Storage Vessels.

ANILINE 1 and 2 PLANTS
 BASF CORPORATION, AI NO. 2049
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TABLE 2: STATE AND FEDERAL AIR QUALITY REGULATIONS

EMISSION SOURCE	APPLICABLE REQUIREMENT	COMPLIANCE METHOD/PROVISION	NOTES
12-90(g) TK-520 Process Water/Stormwater Tank	Storage of Volatile Organic Liquids (LAC 33:III.2103)	DOES NOT APPLY. The vapor pressure of the stored material is <1.5 psia.	
Vents through Emission Source 12-90.	Comprehensive Toxic Air Pollutant Emission Control Program – Emission Control and Reduction Requirements and Standards (LAC 33:III.5109) – STATE ONLY –	This source emits an air toxic for which total facility-wide emissions exceed the MER. Therefore, the source will be controlled as required in the SOCM/MACT.	
	NSPS Subpart Kb – Volatile Organic Liquid Storage (40 CFR 60.110b)	EXEMPT. Per 63.110(b)(1), HON Subpart G tank that overlap applicability with NSPS Subpart Kb need only comply with HON Subpart G. This storage tank complies with 40 CFR 63.133.	
	NESHAP Subpart FF – Benzene Waste Operations (40 CFR 61.343)	SUPERCEDED. BASF elects to comply with HON Group 1 provisions in accordance with 40 CFR 63.100(e).	
	Hazardous Organic NESHAP Subparts F and G – Process Wastewater Provisions -- Wastewater Tanks (40 CFR 63.133)	Emissions from the fixed roof tank are routed through a closed vent system to the incinerator in accordance with 40 CFR 63.133(a)(2)(i).	T-250 bottoms, designated as HON Group 1 stream are sometimes routed to this tank.

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TABLE 2: STATE AND FEDERAL AIR QUALITY REGULATIONS

EMISSION SOURCE	APPLICABLE REQUIREMENT	COMPLIANCE METHOD/PROVISION	NOTES
12-90(h) T-150 Wastewater Steam Stripper and Associated Equipment (E-152/D-152/D-150)	Waste Gas Disposal (LAC 33:III.2115)	VOC emissions from each unit are routed to the incinerator, which maintains a ≥98% reduction efficiency of VOCs in accordance with LAC 33:III.2115.B.	
12-90(n) T-250 Wastewater Steam Stripper and Associated Equipment (E-152/D-152/D-250)	Limiting VOC Emissions from Reactor Processes and Distillation Operations (LAC 33:III.2147) Limiting Volatile Organic Compound Emissions From Industrial Wastewater (LAC 33:III.2153)	EXEMPT. These processes are subject to HON and are exempt per LAC 33:III.2147.A.2.g.	
12-90(o) T-650 Wastewater Steam Stripper and Associated Equipment (E-652/D-652)	Comprehensive Toxic Air Pollutant Emission Control Program - Emission Control and Reduction Requirements and Standards (LAC 33:III.5109) - STATE ONLY - NESHAP Subpart FF - Benzene Waste Operations (40 CFR 61.346)	EXEMPT. The Aniline Plant is subject to the HON wastewater provisions; therefore, it is exempt under LAC 33:III.2153.G.6 This source emits an air toxic for which total facility-wide emissions exceed the MER. Therefore, the sources will be controlled as required in the SOGMI MACT.	
Vent through Emission Source 12-90.	NESHAP Subpart FF - Benzene Waste Operations (40 CFR 61.346)	SUPERCEDED. BASF elects to comply with HON Group 1 provisions in accordance with 40 CFR 63.110(e), although benzene wastewater streams are routed to the steam strippers through a covered, closed-vent system, with emissions routed to a control device and meet requirements of 40 CFR 61.346.	HON Group 1 Wastewater Streams.
	Hazardous Organic NESHAP Subparts F and G - Process Wastewater Provisions (40 CFR 63.132)	The wastewater streams are handled by an enclosed system meeting provisions of 40 CFR 63.133 through 63.137 for any vapor streams routed from this process. The Group 1 wastewater stream is routed via hardpiping to the Wastewater Treatment Plant (WWTP) also meeting provisions of 40 CFR 63.138. Under some operating conditions, D-250 effluent may be stored in TK-520 and has a pre-treatment step (T-650 steam stripper) prior to being routed to the WWTP.	

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TABLE 2: STATE AND FEDERAL AIR QUALITY REGULATIONS

EMISSION SOURCE	APPLICABLE REQUIREMENT	COMPLIANCE METHOD/PROVISION	NOTES
<p>12-90(j) T-330/T-430 Aniline Dewatering Columns and Associated Equipment</p> <p>12-90(k) T-340 Aniline Purification Column and Associated Equipment</p> <p>Vent through Emission Source 12-90.</p>	<p>Waste Gas Disposal (LAC 33:III.2115)</p> <p>Limiting VOC Emissions from Reactor Processes and Distillation Operations (LAC 33:III.2147)</p> <p>NSPS Subpart NNN – SOCFI Distillation Operations (40 CFR 60.660)</p> <p>Hazardous Organic NESHAP Subparts F and G – Process Vent Provisions- Reference Control Technology (40 CFR 63.113)</p>	<p>VOC emissions from the unit are routed to the incinerator, which maintains a ≥98% reduction efficiency of VOCs in accordance with LAC 33:III.2115.B.</p> <p>EXEMPT. Reactor and distillation processes subject to the HON are exempt from LAC 33:III.2147 according to LAC 33:III.2147.A.2.g.</p> <p>EXEMPT. Per 63.110(d)(4), HON Subpart G Group 1 process vents that overlap applicability with NSPS Subpart NNN need only comply with HON Subpart G.</p> <p>Emissions from the unit are routed to the incinerator, which maintains a ≥98% reduction efficiency of total organic HAP.</p>	
<p>12-90(l) T-130/T-230 Benzene Strippers</p> <p>Vent through Emission Source 12-90.</p>	<p>Limiting VOC Emissions from Reactor Processes and Distillation Operations (LAC 33:III.2147)</p> <p>Comprehensive Toxic Air Pollutant Emission Control Program – Emission Control and Reduction Requirements and Standards (LAC 33:III.5109) – STATE ONLY –</p> <p>Hazardous Organic NESHAP Subparts F and G – Process Vent Provisions- Reference Control Technology (40 CFR 63.113)</p>	<p>EXEMPT. Reactor and distillation processes subject to the HON are exempt from LAC 33:III.2147 according to LAC 33:III.2147.A.2.g.</p> <p>This source emits an air toxic for which total facility-wide emissions exceed the MER. Therefore, the sources will be controlled as required in the SOCFI MACT.</p> <p>Emissions from the unit are routed to the incinerator, which maintains a ≥98% reduction efficiency of total organic HAP.</p>	

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TABLE 2: STATE AND FEDERAL AIR QUALITY REGULATIONS

EMISSION SOURCE	APPLICABLE REQUIREMENT	COMPLIANCE METHOD/PROVISION	NOTES
<p>12-90(f) TK-501/TK-502 Hazardous Waste Storage Tanks</p> <p>Vent through Emission Source 12-90.</p>	<p>Comprehensive Toxic Air Pollutant Emission Control Program – Emission Control and Reduction Requirements and Standards (LAC 33:III.5109) – STATE ONLY –</p> <p>Hazardous Organic NESHAP Subpart H – Surge Control Vessels and Bottoms Receivers. (40 CFR 63.170)</p>	<p>This source emits an air toxic for which total facility-wide emissions exceed the MER. Therefore, the sources will be controlled as required in the SOCM I MACT.</p> <p>Emissions from the unit are routed to the Aniline Incinerator, which maintains a ≥98% reduction efficiency of total organic HAP.</p>	<p>Surge control vessels and/or bottoms receivers.</p>
<p>12-90(m) MNB 1 Drum Vents MNB 2 Drum Vents</p> <p>12-90(p) Aniline 1 Drum Vents Aniline 2 Drum Vents</p> <p>Vent through Emission Source 12-90.</p>	<p>Comprehensive Toxic Air Pollutant Emission Control Program – Emission Control and Reduction Requirements and Standards (LAC 33:III.5109) – STATE ONLY –</p> <p>Hazardous Organic NESHAP Subpart H – Surge Control Vessels and Bottoms Receivers (40 CFR 63.170)</p> <p>Hazardous Organic NESHAP Subparts F and G – Process Vent Provisions-Reference Control Technology (40 CFR 63.113)</p>	<p>This source emits an air toxic for which total facility-wide emissions exceed the MER. Therefore, the sources will be controlled as required in the SOCM I MACT.</p> <p>Emissions from the unit are routed to the Aniline Incinerator, which maintains a ≥98% reduction efficiency of total organic HAP.</p> <p>Emissions from the unit are routed to the Aniline Incinerator, which maintains a ≥98% reduction efficiency of total organic HAP.</p>	

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TABLE 2: STATE AND FEDERAL AIR QUALITY REGULATIONS

EMISSION SOURCE	APPLICABLE REQUIREMENT	COMPLIANCE METHOD/PROVISION	NOTES
14-90 Aniline Plant Flare (Y501) [serves as backup control device for all sources routed to 12-90 (Y500)]	Smoke from Flaring Shall Not Exceed 20 Percent Opacity (LAC 33:III.1105)	Smoke from the flare shall be controlled so that the shade of the emission does not exceed 20 percent opacity for a combined total of 6 hours in any 10 consecutive days.	
36-97	Emission Standards for Particulate Matter - Emission Limits (LAC 33:III.1311.B)	DOES NOT APPLY. The flare combusts gaseous fuels only. Gaseous fuels are not included in the definition of "process weight." See LAC 33:III.111.	
Aniline 2 Plant Flare (Y502)	Emission Standards for Particulate Matter - Emission Limits (LAC 33:III.1311.C)	The emission of particulate matter shall be controlled so that the shade or appearance of the emission is not denser than 20% except up to one 6-minute period during any 60 consecutive minutes per LAC 33:III.1311.C.	
ANI02 Aniline 1 Plant Flare (Y503)	Emission Limitations for Sulfur Dioxide (LAC 33:III.1503.C)	EXEMPT. Emissions of sulfur dioxide are kept below 2,000 ppmv.	Unit emits <250 TPY of sulfur compounds.
	Limiting VOC Emissions from Reactor Processes and Distillation Operations (LAC 33:III.2147)	EXEMPT. Reactor and distillation processes subject to the HON are exempt from LAC 33:III.2147 according to 2147.A.2.g.	
	Comprehensive Toxic Air Pollutant Emission Control Program – Emission Control and Reduction Requirements and Standards (LAC 33:III.5109) - STATE ONLY -	These sources shall comply with applicable HON provisions per 40 CFR 63.110(d). These flares maintain ≥98% reduction efficiency of VOCs.	These sources emit air toxics for which total facility wide emissions exceed the MER.
	NSPS Subpart NNN – SOCFI Distillation Operations (40 CFR 60.660)	EXEMPT. Per 63.110(d)(4), HON Subpart G Group 1 process vents that overlap applicability with NSPS Subpart NNNN need only comply with HON Subpart G.	Sources are control devices used to control emissions to MACF. These flares meet the requirements of a HON control device.
	NSPS Subpart RRR – SOCFI Reactor Operations (40 CFR 60.700)	EXEMPT. Per 63.110(d)(7), HON Subpart G Group 1 process vents that overlap applicability with NSPS Subpart RRR need only comply with HON Subpart G.	This would not apply to Y502 and Y503 regardless since they receive vents from reactors only.

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TABLE 2: STATE AND FEDERAL AIR QUALITY REGULATIONS

EMISSION SOURCE	APPLICABLE REQUIREMENT	COMPLIANCE METHOD/PROVISION	NOTES
14-90 Aniline Plant Flare (Y501) [serves as backup control device for all sources routed to 12-90 (Y500)]	NESHAP Subpart Y – Benzene Storage Vessels (40 CFR 61.270)	EXEMPT. Per 63.110(b)(2), HON Subpart G tank that overlap applicability with NSPS Subpart Y need only comply with HON Subpart G. The storage tanks comply with 40 CFR 63.119.	This would not apply to Y502 and Y503 regardless since they receive vents from reactors only.
36-97 Aniline 2 Plant Flare (Y502)	NESHAP – General Provisions (40 CFR 63, Subpart A)	The flares will meet the control device requirements as outlined in 40 CFR 63.11(b).	
ANI02 Aniline 1 Plant Flare (Y503) (continued)	Hazardous Organic NESHAP Subparts F and G – Process Vent Provisions – Reference Control Technology, Monitoring Requirements, Periodic Reporting and Recordkeeping Requirements (40 CFR 63.113, 114, and 118)	The flares will meet the control device requirements as outlined in 40 CFR 63.113(a)(1), 40 CFR 63.114(a)(2), and 40 CFR 63.118.	
	Hazardous Organic NESHAP Subparts F and G – Storage Vessel Provisions – Reference Control Technology (40 CFR 63.119)	Emissions from each HON Group 1 Storage Vessel are routed through a closed vent system to the flare, in accordance with 40 CFR 63.119.	This would not apply to Y502 and Y503 regardless since they receive vents from reactors only.
	Hazardous Organic NESHAP Subparts F and G – Process Wastewater Provisions – Wastewater Tanks (40 CFR 63.133)	The flares meets the control device requirements as outlined in 40 CFR 63.133(a)(2)(i).	This would not apply to Y502 and Y503 regardless since they receive vents from reactors only.
14-90(a) CF123 A/B Centrifuges Vents through Emission Source 14-90.	Waste Gas Disposal (LAC 33:III.2115)	VOC emissions from the unit are routed to the Aniline 2 Plant Flare (Y502), which maintains a ≥98% reduction efficiency of VOCs in accordance with LAC 33:III.2115.B.	
	Limiting VOC Emissions from Reactor Processes and Distillation Operations (LAC 33:III.2147)	EXEMPT. Reactor and distillation processes subject to the HON are exempt from LAC 33:III.2147 according to 2147.A.2.g.	

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EMISSION SOURCE	APPLICABLE REQUIREMENT	COMPLIANCE METHOD/PROVISION	NOTES
14-90(a) CF123 A/B Centrifuges Vents through Emission Source 14-90.	Comprehensive Toxic Air Pollutant Emission Control Program – Emission Control and Reduction Requirements and Standards (LAC 33:III.5109) – STATE ONLY – NSPS Subpart RRR – SOCM I Reactor Operations (40 CFR 60.700) Hazardous Organic NESHAP Subparts F and G – Process Vent Provisions- Reference Control Technology (40 CFR 63.113)	This source emits an air toxic for which total facility-wide emissions exceed the MER. Therefore, the sources will be controlled as required in the SOCM I MACT. EXEMPT. Per 63.110(d)(7), HON Subpart G Group 1 process vents that overlap applicability with NSPS Subpart RRR need only comply with HON Subpart G. Emissions from the unit are routed to the Aniline 2 Plant Flare (Y502), which maintains a ≥98% reduction efficiency of total organic HAP.	
14-90(b) TK-511B High Phenol Wastewater Tank Vents through Emission Source 14-90.	Storage of Volatile Organic Liquids (LAC 33:III.2103) Comprehensive Toxic Air Pollutant Emission Control Program – Emission Control and Reduction Requirements and Standards (LAC 33:III.5109) – STATE ONLY – NSPS Subpart Kb – Volatile Organic Liquid Storage (40 CFR 60.110b) NESHAP Subpart FF – Benzene Waste Operations (40 CFR 61.343) Hazardous Organic NESHAP Subparts F and G – Process Wastewater Provisions – Wastewater Tanks (40 CFR 63.133)	DOES NOT APPLY. The vapor pressure of the stored material is <1.5 psia. This source emits an air toxic for which total facility-wide emissions exceed the MER. Therefore, the source will be controlled as required in the SOCM I MACT. DOES NOT APPLY. The tank does not store a VOC with a true vapor pressure ≥ 0.5 psia. SUPERCEDED. Shall comply with Group 1 requirements per overlap provisions under 63.110.e.1(ii). Emissions from the fixed roof tank are routed through a closed vent system to the Aniline Plant Flare (Y501) in accordance with 40 CFR 63.133.	Designated HON Group 1 wastewater stream.

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TABLE 2: STATE AND FEDERAL AIR QUALITY REGULATIONS

EMISSION SOURCE	APPLICABLE REQUIREMENT	COMPLIANCE METHOD/PROVISION	NOTES
36-97(a) Aniline 2 Plant Reactor Purge Vents through Emission Source 36-97.	Waste Gas Disposal (LAC 33:III.2115) Limiting VOC Emissions from Reactor Processes and Distillation Operations (LAC 33:III.2147)	VOC emissions from the unit are routed to a flare, which maintains a ≥98% reduction efficiency of VOCs in accordance with LAC 33:III.2115.B. EXEMPT. Reactor and distillation processes subject to the HON are exempt from LAC 33:III.2147 according to 2147.A.2.g.	
ANI02(a) Aniline 1 Plant Reactor Purge Vents through Emission Source ANI02.	Comprehensive Toxic Air Pollutant Emission Control Program – Emission Control and Reduction Requirements and Standards (LAC 33:III.5109) – STATE ONLY – NSPS Subpart RRR – SOCOMI Reactor Operations (40 CFR 60.700) Hazardous Organic NESHAP Subparts F and G – Process Vent Provisions – Reference Control Technology (40 CFR 63.113)	This source emits an air toxic for which total facility-wide emissions exceed the MER. Therefore, the sources will be controlled as required in the SOCOMI MACT. EXEMPT. Per 63.110(d)(7), HON Subpart G Group 1 process vents that overlap applicability with NSPS Subpart RRR need only comply with HON Subpart G. Emissions from the unit are routed to a flare, which maintains a ≥98% reduction efficiency of total organic HAP.	

ANILINE 1 and 2 PLANTS
 BASF CORPORATION, AI NO. 2049
 GEISMAR, ASCENSION PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REGULATIONS

EMISSION SOURCE	APPLICABLE REQUIREMENT	COMPLIANCE METHOD/PROVISION	NOTES
15-90 Aniline 1 Plant Fugitives	Pumps and Compressors (LAC 33:III.2111)	Pumps and compressors handling VOCs with a true vapor pressure >1.5 psia are equipped with mechanical seals or equivalent.	BASF employs LDAR and monitors all components under HON Subpart H, per the Fugitive Emission Consolidation Program.
32-97 Aniline 2 Plant Fugitives	Fugitive Emission Control for Ozone Nonattainment Areas (LAC 33:III.2122) Comprehensive Toxic Air Pollutant Emission Control Program – Emission Control and Reduction Requirements and Standards (LAC 33:III.5109) – STATE ONLY –	Comply with the LDAR program under the Consolidation Notice and Agreement. Comply with the LDAR program under the Consolidation Notice and Agreement.	Overall most-stringent program is the HON, 40 CFR Part 63 Subpart H. Overall most-stringent program is the HON, 40 CFR Part 63 Subpart H.
	NSPS Subpart VV – Equipment Leaks of VOC in SOCM1 (40 CFR 60.480)	Comply with the LDAR program under the Consolidation Notice and Agreement.	Overall most-stringent program is the HON, 40 CFR Part 63 Subpart H.
	NESHAP Subpart J – Equipment Leaks (Fugitive Emission Sources) of Benzene (40 CFR 61.110)	Comply with the LDAR program under the Consolidation Notice and Agreement.	Overall most-stringent program is the HON, 40 CFR Part 63 Subpart H.
	NESHAP Subpart V – Equipment Leaks (Fugitive Emission Sources) (40 CFR 61.240)	Comply with the LDAR program under the Consolidation Notice and Agreement.	Overall most-stringent program is the HON, 40 CFR Part 63 Subpart H.
	Hazardous Organic NESHAP Subpart H – Hazardous Air Pollutant Equipment Leaks (40 CFR 63.160)	BASF utilizes a Leak Detection and Repair (LDAR) program to comply with the HON, Subpart H.	Overall most-stringent program is the HON, 40 CFR Part 63 Subpart H.

**ANILINE 1 and 2 PLANTS
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TABLE 2: STATE AND FEDERAL AIR QUALITY REGULATIONS

EMISSION SOURCE	APPLICABLE REQUIREMENT	COMPLIANCE METHOD/PROVISION	NOTES
35-97 Aniline 2 Plant Cooling Tower	Comprehensive Toxic Air Pollutant Emission Control Program – Emission Control and Reduction Requirements and Standards (LAC 33:III.5109) – STATE ONLY –	These sources emit a Class III air toxic, for which total facility-wide emissions exceed the MER. However, controls are not required for a Class III air toxic.	
AN101 Aniline 1 Plant Cooling Tower	Hazardous Organic NESHAP Subpart F – Heat Exchange System Requirements (40 CFR 63.104)	The heat exchange systems shall be monitored per the requirements of §63.104. For each leak detected, first attempt at repair shall be as soon as practical, but no later than 45 days after monitoring results are received, and successful repairs shall be confirmed within 7 days of repair or startup, unless delay of repairs applies.	
AN103 Aniline 1 Plant Cooling Tower 2	NESHAP Subpart Q – Industrial Process Cooling Tower (40 CFR 63.400)	EXEMPT. Cooling towers do not use chromium-based water treatment chemicals.	
Process Wastewater Streams (Aniline 1 and Aniline 2 Plants)	Limiting Volatile Organic Compound Emissions From Industrial Wastewater (LAC 33:III.2153)	EXEMPT. The Aniline Plants are subject to the HON wastewater provisions; therefore, they are exempt under LAC 33:III.2153.G.6.	
	NESHAP Subpart FF – Benzene Waste Operations (40 CFR 61.346)	EXEMPT. Although benzene wastewater streams are routed through a covered, closed-vent system, with emissions routed to a control device meeting requirements of 40 CFR 63.346, BASF elects to comply with HON Group 1 provisions in accordance with 40 CFR 63.110(e).	
	Hazardous Organic NESHAP Subparts F and G – Process Wastewater Provisions - General (40 CFR 63.132)	Compliance methods are detailed under Emission Sources 12-90, 12-90(g), 12-90(h), 12-90(n), and 12-90(o).	HON Group 1 Wastewater Streams. The control devices maintain a total HAP destruction efficiency of 99% or meet biotreatment standards.

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TABLE 2: STATE AND FEDERAL AIR QUALITY REGULATIONS

EMISSION SOURCE	APPLICABLE REQUIREMENT	COMPLIANCE METHOD/PROVISION	NOTES
Facility	Emissions Inventory (LAC 33:III.919)	An affected facility must submit an Annual Emissions Statement (AES) of all air pollutants for which a National Ambient Air Quality Standard (NAAQS) has been issued regardless of the level of emissions.	
	Comprehensive Toxic Air Pollutant Emission Control Program Reporting Requirements Availability of Information, and Public Notice Provisions (LAC 33:III.5107.A) - STATE ONLY -	An affected facility must submit a completed annual emissions report (TEDI) to the Office of Environmental Assessment, Environmental Evaluation Division on or before July 1 of each year.	
	Prevention of Air Pollution Emergency Episodes, Pre-Planned Strategies Required (LAC 33:III.5609)	This regulation requires that sources listed in Tables 5, 6, and 7 prepare standby plans for the reduction of emissions during periods of Air Pollution Warming and Air Pollution Emergency.	BASF has prepared the required standby plan in accordance with the objectives set forth in Tables 5, 6, and 7.
	Chemical Accident Prevention, Registration (LAC 33:III.5911)	This regulation requires that the owner or operator of each major stationary source register with the administrative authority.	BASF has registered with the administrative authority in accordance with the specifications listed in LAC 33:III.5911.
	NSPS Subpart A - General Provisions (40 CFR 60.1 through 19)	All affected sources shall comply with applicable provisions of this subpart.	New Source Performance Standards
	40 CFR 68 Chemical Accident Prevention Provisions	Maintain a Risk Management Plan on site and comply with all applicable regulations in 40 CFR 68.	

ANILINE 1 and 2 PLANTS
 BASF CORPORATION, AI NO. 2049
 GEISMAR, ASCENSION PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REGULATIONS

EMISSION SOURCE	APPLICABLE REQUIREMENT	COMPLIANCE METHOD/PROVISION	NOTES
Facility (continued)	Stratospheric Ozone Protection (40 CFR 82)	<p>Class I or II Refrigerants used in appliances or industrial process refrigeration systems may not be knowingly vented, released or disposed in a manner than allows them to enter the environment, unless otherwise provided in the regulations. De minimis releases associated with good faith attempts to recover or safely dispose of these refrigerants are not prohibited (40 CFR 82.154-166);</p> <p>Owners of commercial and industrial process refrigeration equipment must have all leaks repaired if the equipment is leaking at a rate such that the loss of refrigerant will exceed 35% of the total charge during a 12-month period within 30 days unless they develop a one-year retrofit or retirement plan for the leaking equipment;</p> <p>Owners of appliances normally containing >50 lbs of refrigerant and not covered above must have all leaks repaired if the appliance is leaking at a rate such that the loss of refrigerant will exceed 15% of the total charge during a 12-month period, unless they develop a one-year retrofit or retirement plan for the leaking equipment (40 CFR 82.154-166).</p>	

ANILINE 1 and 2 PLANTS
 BASF CORPORATION, AI NO. 2049
 GEISMAR, ASCENSION PARISH, LOUISIANA

TABLE 3: COMPLIANCE MONITORING DEVICES, ACTIVITIES, OR METHODS

EMISSION SOURCE	APPLICABLE REQUIREMENT	MONITORING, REPORTING, AND RECORDKEEPING (MRR) METHODS/PROVISIONS	NOTES
12-90 Aniline Plant Incinerator	Emission Standards for Particulate Matter – Emission Limits (LAC 33:III.1311.C) Hazardous Organic NESHAP (HON) – Process Vent Provisions Monitoring Requirements (40 CFR 63.114)	Average opacity not to exceed 20% for more than 6 minutes in any 60-minute period. Monitor firebox temperature continuously, per 40 CFR 63.114(a)(1).	BASF complies with temperature limits in recent Subpart EEE testing (HWC MACT) in lieu of limits established during the past RCRA trial burn.
	Hazardous Organic NESHAP (HON) – Process Vent Provisions – Reporting and Recordkeeping Requirements for Group and TRE Determinations and Performance Tests (40 CFR 63.117)	Performance test results.	HON Group 1 process vents are routed to the incinerator or flare.
	Hazardous Organic NESHAP (HON) – Process Vent Provisions – Periodic Reporting and Recordkeeping Requirements (40 CFR 63.118)	Average daily monitoring and recordkeeping of parameters and values that are outside of range established in NCS.	HON Group 1 process vents are routed to the incinerator or flare.
12-90(a) TK-510A Benzene Tank Vents through Emission Source 12-90.	Hazardous Organic NESHAP (HON) Subpart EEE – Hazardous Waste Combustors (40 CFR 63.1206) Storage of Volatile Organic Liquids (LAC 33:III.2103)	Shall comply with the operating parameter limits of the Notification of Compliance Status as required by 40 CFR 63.1207.j. Records to be maintained for two years including: 1. Results of inspections. 2. Daily measurements of the exhaust gas temperature immediately downstream of a direct-flame incinerator. 3. Date and reason for maintenance. 4. Results of testing.	

ANILINE 1 and 2 PLANTS
 BASF CORPORATION, AI NO. 2049
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TABLE 3: COMPLIANCE MONITORING DEVICES, ACTIVITIES, OR METHODS

EMISSION SOURCE	APPLICABLE REQUIREMENT	MONITORING, REPORTING, AND RECORDKEEPING (MRR) METHODS/PROVISIONS	NOTES
<p>12-90(a) TK-510A Benzene Tank</p> <p>Vents through Emission Source 12-90.</p>	<p>Hazardous Organic NESHAP (HON) – Storage Vessel Provisions (40 CFR 63.119 – 62.123)</p>	<p>Dimensions and capacity of each tank required and the requirements of 40 CFR 63.122.</p> <p>1. These include:</p> <ul style="list-style-type: none"> a) Initial Notification. b) Implementation Plan. c) Notification of Compliance Status (NCS) Report including design evaluation or submission of results of performance tests. <p>2. Measured values of the operating range parameters monitored as part of the NCS to ensure proper operation of the control device.</p> <p>3. Periodic reports including planned routine maintenance, including duration of such.</p>	
<p>12-90(b) TK-514C Aniline Tank</p> <p>12-90(c) TK-513 Nitrobenzene Tank</p> <p>12-90(d) TK-514A Aniline Tank</p> <p>12-90(e) TK-514B Aniline Tank</p> <p>12-90(f) TK-516 Nitrobenzene Tank</p> <p>Vent through Emission Source 12-90.</p>	<p>HON – Storage Vessel Provisions (40 CFR 63.119)</p>	<p>Dimensions and capacity of storage vessel, per 40 CFR 63.123(a).</p>	<p>HON (Group 2 Storage Vessels</p>

ANILINE 1 and 2 PLANTS
 BASF CORPORATION, AI NO. 2049
 GEISMAR, ASCENSION PARISH, LOUISIANA

TABLE 3: COMPLIANCE MONITORING DEVICES, ACTIVITIES, OR METHODS

EMISSION SOURCE	APPLICABLE REQUIREMENT	MONITORING, REPORTING, AND RECORDKEEPING (MRR) METHODS/PROVISIONS	NOTES
12-90(g) TK-520 Process Water/Stormwater Tank	HON Process Wastewater Provisions – Inspections and Monitoring of Operations (40 CFR 63.143)	In accordance with 40 CFR 63.139 control device provisions.	
Vents through Emission Source 12-90.	HON Process Wastewater Provisions – Reporting (40 CFR 63.146)	1. Implementation Plan 2. NCS 3. Periodic Reports	
12-90(h) T-150 Wastewater Steam Stripper and Associated Equipment (E-152/D-152/D- 150)	HON Process Wastewater Provisions – Recordkeeping (40 CFR 63.147)	Record of all reports submitted in accordance with 40 CFR 63.122 (Initial Notification, Implementation Plan, Notification of Compliance Status Reports, and Periodic Reports)	
12-90(n) T-250 Wastewater Steam Stripper and Associated Equipment (E-152/D-152/D- 250)	HON Process Wastewater Provisions – Inspections and Monitoring of Operations (40 CFR 63.143)	In accordance with 40 CFR 63.139 control device provisions.	
12-90(o) T-650 Wastewater Steam Stripper and Associated Equipment (E-652/D-652)	HON Process Wastewater Provisions – Reporting (40 CFR 63.146)	1. Implementation Plan 2. NCS 3. Periodic Reports	
Vent through Emission Source 12-90.	HON Process Wastewater Provisions – Recordkeeping (40 CFR 63.147)	Record of all reports submitted in accordance with 40 CFR 63.122 (Initial Notification, Implementation Plan, Notification of Compliance Status Reports, and Periodic Reports)	

ANILINE 1 and 2 PLANTS
 BASF CORPORATION, AI NO. 2049
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TABLE 3: COMPLIANCE MONITORING DEVICES, ACTIVITIES, OR METHODS

EMISSION SOURCE	APPLICABLE REQUIREMENT	MONITORING, REPORTING, AND RECORDKEEPING (MRR) METHODS/PROVISIONS	NOTES
12-90(j) T-330/T-430 Aniline Dewatering Columns and Associated Equipment 12-90(k) T-340 Aniline Purification Column and Associated Equipment Vent through Emission Source 12-90.	Waste Gas Disposal (LAC 33:III.2115)	Records to be kept on-site for 2 years: 1. Test results. 2. Date of maintenance or repair and the estimated quantity and duration of VOC emissions. 3. Records demonstrating proper functioning of control device.	The incinerator shall maintain a ≥98% destruction efficiency of VOCs.
12-90(i) T-130/T-230 Benzene Strippers Vent through Emission Source 12-90.	HON Process Vent Provisions – Monitoring Requirements (40 CFR 63.114) HON Process Vent Provisions – Periodic Reporting and Recordkeeping Requirements (40 CFR 63.118)	Firebox temperature. Average daily monitoring and record keeping of parameters and values that are outside of range established in NCS.	

ANILINE 1 and 2 PLANTS
 BASF CORPORATION, AI NO. 2049
 GEISMAR, ASCENSION PARISH, LOUISIANA

TABLE 3: COMPLIANCE MONITORING DEVICES, ACTIVITIES, OR METHODS

EMISSION SOURCE	APPLICABLE REQUIREMENT	MONITORING, REPORTING, AND RECORDKEEPING (MRR) METHODS/PROVISIONS	NOTES
12-90(m) MNB 1 Drum Vents MNB 2 Drum Vents	Hazardous Organic NESHAP Subpart H – Surge Control Vessels and Bottoms Receivers (40 CFR 63.170)	Shall comply with 40 CFR 63.170 for CVS and control devices.	
12-90(p) Aniline 1 Drum Vents Aniline 2 Drum Vents Vent through Emission Source 12-90.			
14-90 Aniline Plant Flare (Y501)	Smoke from Flaring Not to Exceed 20 Percent Opacity (LAC 33:III.1105)	Notify of upset or emergency which may cause smoke to exceed 20 percent opacity for more than 6 hours in any consecutive 10 days.	
36-97 Aniline 2 Plant Flare (Y502)	Emission Standards for Particulate Matter – Emission Limits (LAC 33:III.1311.C.)	Average opacity shall be less than 20% for more than 6 minutes in any 60-minute period.	
AN102 Aniline 1 Plant Flare (Y503)			

ANILINE 1 and 2 PLANTS
 BASF CORPORATION, AI NO. 2049
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TABLE 3: COMPLIANCE MONITORING DEVICES, ACTIVITIES, OR METHODS

EMISSION SOURCE	APPLICABLE REQUIREMENT	MONITORING, REPORTING, AND RECORDKEEPING (MRR) METHODS/PROVISIONS	NOTES
14-90 Aniline Plant Flare (Y501)	HON - General Provisions (40 CFR 63.11(b))	<ol style="list-style-type: none"> 1. Flare is to be operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. 2. Thermocouple or equivalent flame detection device required to ensure continuous presence of a pilot flame. 3. Maintain combustion gas heating value of ≥ 200 Btu/scf (non-assisted flares); ≥ 300 BTU/scf (steam - assisted flared); or the hydrogen requirements of 8.0% by volume. 4. Operate with an exit velocity < 60 ft/second or less than V_{max}, but if operated less than V_{max} then less than 400 ft/second. 	Y502 and Y503 meet the hydrogen requirement of 8.0% or greater. Y501 is steam-assisted and meets ≥ 300 BTU/scf.
36-97 Aniline 2 Plant Flare (Y502)	HON Process Vent Provisions - Monitoring Requirements (40 CFR 63.114(a)(2))	Including but not limited to thermocouple, ultra-violet beam sensor, or infrared sensor required to ensure continuous presence of a pilot flame. In accordance with 40 CFR 63.118.	
AN102 Aniline 1 Plant Flare (Y503) (continued)	HON Process Vent Provisions - Periodic Reporting and Recordkeeping Requirements (40 CFR 63.118)	<ol style="list-style-type: none"> 1. Hourly records of operation of pilot flame monitor with indications of flame-out with times and duration of such outages. 2. Any change that causes a Group 2 process vent to become a Group 1 process vent. Notification of a change in Group category must be made within 180 days of such change.	

**ANILINE 1 and 2 PLANTS
 BASF CORPORATION, AI NO. 2049
 GEISMAR, ASCENSION PARISH, LOUISIANA**

TABLE 3: COMPLIANCE MONITORING DEVICES, ACTIVITIES, OR METHODS

EMISSION SOURCE	APPLICABLE REQUIREMENT	MONITORING, REPORTING, AND RECORDKEEPING (MRR) METHODS/PROVISIONS	NOTES
14-90(b) TK-511B Aniline Wastewater Tank	HON Process Wastewater Provisions – Inspections and Monitoring of Operations (40 CFR 63.143) Hazardous Organic NESHAP (HON) Subpart G – Process Wastewater Provisions – Reporting (40 CFR 63.146)	In accordance with 40 CFR 63.139 control device provisions. 1. Implementation Plan 2. NCS 3. Periodic Reports	
15-90 Aniline 1 Plant Fugitives	Hazardous Organic NESHAP (HON) Subpart G – Process Wastewater Provisions – Recordkeeping (40 CFR 63.147)	Maintain record of all reports submitted in accordance with 40 CFR 63.122 (Initial Notification, Implementation Plan, Notification of Compliance Status Reports, and Periodic Reports)	
32-97 Aniline 2 Plant Fugitives	Hazardous Organic NESHAP (HON) Subpart H – Hazardous Air Pollutant Equipment Leaks (40 CFR 63.160)	The following are required for this regulation: 1. A hydrocarbon detection instrument meeting the requirements of 40 CFR 60, Appendix A, Method 21. 2. Regulated equipment must be identified and monitored as specified in the HON, Subpart H. 3. Records must be kept daily to log leaks and repairs performed.	
Process Wastewater Streams (Aniline 1 and Aniline 2 Plants)	Hazardous Organic NESHAP (HON) Subpart G – Process Wastewater Provisions - General (40 CFR 63.132)	Semiannual reports are to be submitted including information specified in 40 CFR 63.182(d) and any other requirements outlined in 40 CFR 63.181 must be met. Incinerator recordkeeping including: 1. Firebox temperature continuously. Documentation must be available of determination of HON Group 1 wastewater stream.	Initial reporting is required as described in 40 CFR 63.146.

ANILINE 1 and 2 PLANTS
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TABLE 3: COMPLIANCE MONITORING DEVICES, ACTIVITIES, OR METHODS

EMISSION SOURCE	APPLICABLE REQUIREMENT	MONITORING, REPORTING, AND RECORDKEEPING (MRR) METHODS/PROVISIONS	NOTES
Facility	Emissions Inventory (LAC 33:III.919)	Annual Emissions Reporting per LAC 33:III.919.B.	
	Comprehensive Toxic Air Pollutant Emission Control Program (LAC 33:III.5109) - STATE ONLY -	Toxic Emission Data Inventory per LAC 33:III.5107.A.	
	Stratospheric Ozone Protection (40 CFR 82)	Amount of leaking refrigerant on an annual basis. Record of annual percentage of leaking refrigerant, amount of refrigerant added, and repair records. Report within 6 months of >35% leaking refrigerant if requesting additional period per 40 CFR 82.156(1)(7). More than 30 days for completion of repair work. Leaks of >35% total capacity. Maintain records for 3 years minimum on all units containing >50 lbs refrigerant. If using substitute for ozone-depleting material, document assessment of other alternative per 40 CFR 82.180.	

ANILINE 1 and 2 PLANTS
 BASF CORPORATION, AI NO. 2049
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TABLE 4: COMPLIANCE TESTING REQUIREMENTS

EMISSION SOURCE	CONTROL DEVICE/ WORK PRACTICE	TEST METHOD	CRITERIA BEING TESTED	NOTES
12-90 Aniline Plant Incinerator	None	EPA Method 3B	Carbon dioxide concentration	Final control device
	None	EPA Method 1 or 1A	Traverse locations, sampling sites	Final control device
	None	EPA Method 2, 2A, 2C or 2D	Inlet gas velocity	Final control device
	None	EPA Method 25A	Total hydrocarbons	Final control device
	None	EPA Method 0023A	Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans	Final control device
	None	EPA Method 29	Mercury, cadmium, lead, arsenic, beryllium and chromium	Final control device
14-90 Aniline Plant Flare (Y501)	None	EPA Method 5 or 5I	Particulate matter	Final control device
	None	SW-846 EPA Method 0030	Volatile POHC, monochlorobenzene	Final control device
	None	EPA Method 22	Visual determination of smoke emissions from flares	Final control device
	None	EPA Method 25A	Total hydrocarbons	Final control device
36-97 Aniline 2 Plant Flare (Y502)	None	EPA Method 2, 2A, 2C, or 2D	Inlet gas velocity	Final control device
	None			
AN102 Aniline 1 Plant Flare (Y503)	None			
	None			
15-90 Aniline 1 Plant Fugitives	Leak detection and repair	Method 21	Determination of VOC leaks	
32-97 Aniline 2 Plant Fugitives				
N/A Process Wastewater Streams (Aniline 1 and Aniline 2 Plants)	Ozonation or biological treatment	EPA Method 305 of 40 CFR 63, Appendix A or EPA Method 25D of 40 CFR 60, Appendix A	VOHAP concentration	HON Group 1 wastewater streams

**ANILINE 1 and 2 PLANTS
 BASF CORPORATION, AI NO. 2049
 GEISMAR, ASCENSION PARISH, LOUISIANA**

TABLE 5: EQUIPMENT LIST

EMISSION POINT/ IDENTIFIER	DESCRIPTION	CONTROL DEVICE
10-90(a)	TK-511A Nitric Acid Tank	Aniline Plant Nitric Acid Scrubber Vent
10-90(b)	Tank Depressurization	Aniline Plant Nitric Acid Scrubber Vent
12-90(a)	TK-510A Benzene Tank	Aniline Plant Incinerator / Aniline Plant Flare (Y501) (as backup)
12-90(b)	TK-514C Aniline Tank	Aniline Plant Incinerator / Aniline Plant Flare (Y501) (as backup)
12-90(c)	TK-513 Nitrobenzene Tank	Aniline Plant Incinerator / Aniline Plant Flare (Y501) (as backup)
12-90(d)	TK-514A Aniline Tank	Aniline Plant Incinerator / Aniline Plant Flare (Y501) (as backup)
12-90(e)	TK-514B Aniline Tank	Aniline Plant Incinerator / Aniline Plant Flare (Y501) (as backup)
12-90(f)	TK-516 Nitrobenzene Tank	Aniline Plant Incinerator / Aniline Plant Flare (Y501) (as backup)
12-90(g)	TK-520 Process Water/Stormwater Tank	Aniline Plant Incinerator / Aniline Plant Flare (Y501) (as backup)
12-90(h)	T-150 Wastewater Steam Stripper and Associated Equipment (E-152/D-152/D-150)	Aniline Plant Incinerator / Aniline Plant Flare (Y501) (as backup)
12-90(i)	TK-501/TK-502 Hazardous Waste Storage Tanks	Aniline Plant Incinerator / Aniline Plant Flare (Y501) (as backup)
12-90(j)	T-330/T-430 Aniline Dewatering Columns and Associated Equipment	Aniline Plant Incinerator / Aniline Plant Flare (Y501) (as backup)
12-90(k)	T-340 Aniline Purification Column and Associated Equipment	Aniline Plant Incinerator / Aniline Plant Flare (Y501) (as backup)
12-90(l)	T-130/T-230 Benzene Strippers	Aniline Plant Incinerator / Aniline Plant Flare (Y501) (as backup)
12-90(m)	MNB 1/MNB 2 Drum Vents	Aniline Plant Incinerator / Aniline Plant Flare (Y501) (as backup)
12-90(n)	T-250 Wastewater Steam Stripper and Associated Equipment (E-152/D-152/D-250)	Aniline Plant Incinerator / Aniline Plant Flare (Y501) (as backup)
12-90(o)	T-650 Wastewater Steam Stripper and Associated Equipment (E-652/D-652)	Aniline Plant Incinerator / Aniline Plant Flare (Y501) (as backup)
12-90(p)	Aniline 1/Aniline 2 Drum Vents	Aniline Plant Incinerator / Aniline Plant Flare (Y501) (as backup)
14-90(a)	CF123 A/B Centrifuges	Aniline Plant Flare (Y501)
14-90(b)	TK-511B High Phenol Wastewater Tank	Aniline Plant Flare (Y501)
36-97(a)	Aniline 2 Plant Reactor Purge	Aniline 2 Plant Flare (Y502)
36-97(b)	Aniline 2 Plant Reactor Regeneration Vent	NA
ANI02(a)	Aniline 1 Plant Reactor Purge	Aniline 1 Plant Flare (Y503)
ANI02(b)	Aniline 1 Plant Reactor Regeneration Vent	NA

AIR QUALITY DATA SHEET

**ANILINE 1 and 2 PLANTS
BASF CORPORATION, AI NO. 2049
GEISMAR, ASCENSION PARISH, LOUISIANA**

Location of facility: 15 UTM: 692.00 Km E 3342.20 Km N

Description of location: 8404 River Road, between I-10 and Hwy. 13

Estimated starting date of construction: Operating

Estimated starting date of operation: Operating

Type of Dispersion Calculations Used: NA

EFFECTS ON AMBIENT AIR

Pollutant	Time Period	Calculated Maximum Ground Level Concentration	Louisiana Air Quality Standard (NAAQS)
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EXISTING OR MODIFIED EMISSION SOURCES SOCMI
(Type of Source)

EMISSION POINT LIST

ANILINE 1 and 2 PLANTS BASF CORPORATION, AI NO. 2049 GEISMAR, ASCENSION PARISH, LOUISIANA

Emission Point No.	Operating Description	Rate (Max) or Tank Capacity	Op. Schedule	H/D	D/W	W/Y
10-90	Aniline Plant Nitric Acid Scrubber Vent		N/A	24	7	52
11-90	Aniline Plant Sulfuric Acid Storage/Unloading Vent		N/A	24	7	52
12-90	Aniline Incinerator (Y500)	28.1 MM BTU/hr		24	7	52
13-90	Aniline Plant Wastewater Treatment System		N/A	24	7	52
14-90	Aniline Plant Flare (Y501)		N/A	24	7	52
15-90	Aniline 1 Plant Fugitives		N/A	24	7	52
32-97	Aniline 2 Fugitives		NA	24	7	52
35-97	Aniline II Cooling Tower	12,000 gpm		24	7	52
36-97	Aniline II Flare (Y502)	0.14 MM BTU/hr		24	7	52
ANI01	Aniline I Plant Cooling Tower		N/A	24	7	52
ANI02	Aniline I Plant Flare (Y503)		N/A	24	7	52
ANI03	Aniline I Plant Cooling Tower 2		N/A	24	7	52

Department of Environmental Quality
Office of Environmental Services
Permits Division
P.O. Box 4313
Baton Rouge, LA 70821-4313
(225) 219-3181

LOUISIANA
SINGLE POINT SOURCE / AREA SOURCE
Emission Inventory Questionnaire (EIQ)
for Air Pollutants



Company name BASF Corporation		Plant location and name (if any) Aniline 1 and 2 Plants Geismar, LA		Date of submittal March 2006					
Source ID Number 10-90		Descriptive name of the equipment served by this stack or vent Aniline Plant Nitric Acid Scrubber Vent				Location of stack or vent (see instructions on how to determine location of area sources): Horizontal coordinate: 692290 mE Vertical coordinate: 3340880 mN			
Stack and discharge physical characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) 25	Diameter (ft) or stack discharge area (ft ²) 0.5 ft	Stack gas exit temperature (°F) 70	Stack gas flow at process conditions, not at standard (cfm) 17.6	Stack gas exit velocity (ft/sec) 1.5	Date of construction /modification N/A	Operating rate (max) or tank capacity (gals) N/A		
Type of fuel used and heat input (see instructions)		Operating Characteristics		Percent of annual throughput of pollutants through this emission point		Normal operating time of this point			
Type of fuel a N/A b c		Heat input (MMBtu/hr) N/A		>>		Dec-Feb 25 Mar-May 25 Jun-Aug 25 Sep-Nov 25		hrs/day 24 days/week 7 weeks/year 52	
Air Pollutant Specific Information									
Pollutant Nitric Acid		Control equipment code 013	Control equipment efficiency % 99.9	Emission Rate Average (lbs/hr) < 0.001 Maximum (lbs/hr) 0.05 Annual (tons/yr) < 0.01		Emission estimation method 2	Add, change, delete code	Concentration in gases exiting at stack N/A ppm by vol	

Department of Environmental Quality
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LOUISIANA
SINGLE POINT SOURCE / AREA SOURCE
Emission Inventory Questionnaire (EIQ)
for Air Pollutants



Company name: **BASF Corporation**
Plant location and name (if any): **Aniline 1 and 2 Plants Geismar, LA**
Date of submittal: **March 2006**

Source ID Number: **11-90**
Descriptive name of the equipment served by this stack or vent: **Aniline Plant Sulfuric Acid Storage/Unloading Vent**
Location of stack or vent (see instructions on how to determine location of area sources):
Horizontal coordinate: **692290 mE**
Vertical coordinate: **3340880 mN**
UTM Zone No. **15**

Stack and discharge physical characteristics
Change Yes No
Height of stack above grade (ft): **11**
Diameter (ft) or stack discharge area (ft²): **0.25 ft**
Stack gas exit temperature (°F): **70**
Stack gas flow at process conditions, not at standard (cfm): **2.8**
Stack gas exit velocity (ft/sec): **0.9**
Date of construction/modification: **N/A**
Operating rate (max) or tank capacity (gals): **N/A**

Type of fuel used and heat input (see instructions)
Type of fuel: **N/A**
Heat input (MMBtu/hr): **N/A**
Operating Characteristics: **>>**
Percent of annual throughput of pollutants through this emission point:
Dec-Feb: **25** Mar-May: **25** Jun-Aug: **25** Sep-Nov: **25**
Normal operating time of this point: **7** days/week
Normal operating rate: **24** hrs/day
Normal operating time of this point: **7** days/week
Normal operating rate: **52** weeks/year

Air Pollutant Specific Information
Pollutant: **Sulfuric Acid**
Control equipment code: **000**
Control equipment efficiency %: **0**
Emission Rate:
Average (lbs/hr): **< 0.001**
Maximum (lbs/hr): **0.04**
Annual (tons/yr): **< 0.01**
Emission estimation method: **2**
Add, change, delete code:
Concentration in gases exiting at stack: **N/A** ppm by vol

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for Air Pollutants



Company name

BASF Corporation

Plant location and name (if any)

Aniline 1 and 2 Plants Geismar, LA

Date of submittal

March 2006

Source ID Number

12-90

Descriptive name of the equipment served by this stack or vent

Aniline Plant Incinerator (Y500)

Location of stack or vent (see instructions on how to determine location of area sources).

Horizontal coordinate: **692290 mE**
Vertical coordinate: **3340880 mN**
UTM Zone No. **15**

Stack and discharge physical characteristics
Change Yes No

Height of stack above grade (ft) **39**

Diameter (ft) or stack discharge area (ft²) **1.875 ft**

Stack gas exit temperature (°F) **250**

Stack gas flow at process conditions, not at standard (cfm) **7,524**

Stack gas exit velocity (ft/sec) **15.1**

Date of construction /modification **N/A**
Operating rate (max) or tank capacity (gals) **28.1 MMBtu/hr**

Type of fuel used and heat input (see instructions)

Type of fuel

a	Waste liquid	17.9
b	Waste gas	1.4
c	Natural gas	8.8

Operating Characteristics

>>

Percent of annual throughput of pollutants through this emission point

Dec-Feb	25	Mar-May	25	Jun-Aug	25	Sep-Nov	25
---------	----	---------	----	---------	----	---------	----

Normal operating time of this point

hrs/day	24	days/week	7	weeks/year	52
---------	----	-----------	---	------------	----

Normal operating rate

28.1 MMBtu/hr

Air Pollutant Specific Information

Pollutant	Control equipment code	Control equipment efficiency %	Emission Rate			Emission estimation method	Add, change, delete code	Concentration in gases exiting at stack
			Average (lbs/hr)	Maximum (lbs/hr)	Annual (tons/yr)			
PM 10	001	>95	0.21	0.62	0.91	3/5	C	N/A gr/std ft ³
Sulfur Dioxide	000	0	0.01	0.02	0.02	3/5	C	N/A ppm by vol
Nitrogen Oxides	000	0	5	15	21.84	3/5	C	N/A ppm by vol
Carbon Monoxide	000	0	2.32	6.95	10.15	3/5	C	N/A ppm by vol
Ammonia	021	99.99	< 0.001	< 0.001	< 0.01	3/5	C	N/A ppm by vol
Copper						1	D	N/A gr/std ft ³
Nickel						1	D	N/A gr/std ft ³
Total VOC (including those listed)	021	99.99	0.19	0.41	0.83	3/5	C	N/A ppm by vol
Aniline	021	99.99	0.1	0.29	0.43	3/5	C	N/A ppm by vol
Benzene	021	99.99	< 0.01	0.02	0.02	3/5	C	N/A ppm by vol

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 for Air Pollutants



Company name

BASF Corporation

Plant location and name (if any)

Aniline 1 and 2 Plants Geismar, LA

Date of submittal

March 2006

Source ID Number

12-90

Descriptive name of the equipment served by this stack or vent

Aniline Plant Incinerator (Y500)

Location of stack or vent (see instructions on how to determine location of area sources).

Horizontal coordinate: **692290 mE**
 Vertical coordinate: **3340880 mN**

UTM Zone No. **15**

Air Pollutant Specific Information

Pollutant	Control equipment code	Control equipment efficiency %	Emission Rate			Emission estimation method	Add, change, delete code	Concentration in gases exiting at stack	
			Average (lbs/hr)	Maximum (lbs/hr)	Annual (tons/yr)			N/A	ppm by vol
Formaldehyde	000	0	0.001	0.002	< 0.01	3	C	N/A	ppm by vol
Hexane, n-	000	0	0.02	0.05	0.07	3	C	N/A	ppm by vol
Mononitrobenzene	021	99.99	0.03	0.1	0.14	3/5	C	N/A	ppm by vol

Sources venting to the Incinerator include storage tanks TK-510A, TK-513, TK-514A/B, TK-514C (formerly TK-510B), TK-516, and TK-520, D-500, D-501, D-502, and D-503.

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Company name: **BASF Corporation**
Plant location and name (if any): **Aniline 1 and 2 Plants Geismar, LA**
Date of submittal: **March 2006**

Source ID Number: **13-90**
Descriptive name of the equipment served by this stack or vent: **Aniline Plant Wastewater Treatment System**
Location of stack or vent (see instructions on how to determine location of area sources):
Horizontal coordinate: **692290 mE**
Vertical coordinate: **3340880 mN**
UTM Zone No. **15**

Stack and discharge physical characteristics: Change Yes No
Height of stack above grade (ft): **110**
Diameter (ft) or stack discharge area (ft²): **1 ft**
Stack gas exit temperature (°F): **203**
Stack gas flow at process conditions, not at standard (cfm): **2,063**
Stack gas exit velocity (ft/sec): **30**
Date of construction /modification: **N/A**
Operating rate (max) or tank capacity (gals): **N/A**

Type of fuel used and heat input (see instructions):
Heat input (MMBtu/hr): **N/A**
Operating Characteristics: **>>**
Percent of annual throughput of pollutants through this emission point:
Dec-Feb: **25** Mar-May: **25** Jun-Aug: **25** Sep-Nov: **25**
Normal operating time of this point: **7** days/week, **24** hrs/day, **52** weeks/year

Air Pollutant Specific Information

Pollutant	Control equipment code	Control equipment efficiency %	Emission Rate		Emission estimation method	Add, change, delete code	Concentration in gases exiting at stack		
			Average (lbs/hr)	Annual (tons/yr)			N/A	ppm by vol	N/A
Nitrogen Oxides	000	0	0.98	2.94	2		N/A	ppm by vol	
Hydrochloric Acid	000	0	0.02	0.05	2		N/A	ppm by vol	
Total VOC (including those listed)	000	0	0.21	0.63	2		N/A	ppm by vol	

* Oxygen 6,600 lbs/hr

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Company name: **BASF Corporation**
 Plant location and name (if any): **Aniline 1 and 2 Plants Geismar, LA**
 Date of submittal: **March 2006**

Source ID Number: **14-90**
 Descriptive name of the equipment served by this stack or vent: **Aniline Plant Flare (Y501)**
 Location of stack or vent (see instructions on how to determine location of area sources):
 UTM Zone No. **15** Horizontal coordinate: **692290 mE**
 Vertical coordinate: **3340880 mN**

Stack and discharge physical characteristics: Change Yes No
 Diameter (ft) or stack discharge area (ft²): **0.83 ft**
 Height of stack above grade (ft): **75**
 Stack gas exit temperature (°F): **1,400**
 Stack gas flow at process conditions, not at standard (cfm): **385.6**
 Stack gas exit velocity (ft/sec): **11.8**
 Date of construction/modification: **N/A**
 Operating rate (max) or tank capacity (gals): **N/A**

Fuel	Type of fuel	Heat input (MMBtu/hr)		Percent of annual throughput of pollutants through this emission point				Normal operating time of this point		Normal operating rate
		a	b	Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	hrs/day	days/week	
>>	Natural gas	2.6	2.0	25	25	25	25	24	7	52
>>	Offgas									

Air Pollutant Specific Information

Pollutant	Control equipment code	Control equipment efficiency %	Emission Rate			Emission estimation method	Add, change, delete code	Concentration in gases exiting at stack
			Average (lbs/hr)	Maximum (lbs/hr)	Annual (tons/yr)			
PM 10	000	0	0.03	0.52	0.15	3	C	N/A g/std ft³
Sulfur Dioxide	000	0	0.002	0.04	0.01	3	C	N/A ppm by vol
Nitrogen Oxides	000	0	2.36	4.66	10.32	3	C	N/A ppm by vol
Carbon Monoxide	000	0	1.64	25.36	7.19	3	C	N/A ppm by vol
Ammonia	023	98	0.01	0.01	0.02	2/6	C	N/A ppm by vol
Total VOC (including those listed)	023	98	0.67	0.67	2.94	2/3/6	C	N/A ppm by vol
Aniline	023	98	0.12	0.12	0.51	2/6	C	N/A ppm by vol
Benzene	023	98	0.31	0.31	1.34	2/6	C	N/A ppm by vol
Formaldehyde	000	0	< 0.001	0.01	< 0.01	3	A	N/A ppm by vol
Hexane, n.	000	0	0.01	0.12	0.02	3	A	N/A ppm by vol

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Company name

BASF Corporation

Plant location and name (if any)

Aniline 1 and 2 Plants Geismar, LA

Date of submittal

March 2006

Source ID Number

14-90

Descriptive name of the equipment served by this stack or vent

Aniline Plant Flare (Y501)

Location of stack or vent (see instructions on how to determine location of area sources).

Horizontal coordinate: **692290 mE**
 Vertical coordinate: **3340880 mN**
 UTM Zone No. **15**

Air Pollutant Specific Information

Pollutant	Control equipment code	Control equipment efficiency %	Emission Rate			Emission estimation method	Add, change, delete code	Concentration in gases exiting at stack
			Average (lbs/hr)	Maximum (lbs/hr)	Annual (tons/yr)			
Mononitrobenzene	023	98	0.02	0.02	0.09	2/6	C	N/A ppm by vol

The Aniline Plant Flare operates as a primary control device for certain vent streams and as an alternative control device for other vent streams during periods when the Aniline Plant Incinerator is down.

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Company name

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Plant location and name (if any)

Aniline 1 and 2 Plants Geismar, LA

Date of submittal

March 2006

Source ID Number

15-90

Descriptive name of the equipment served by this stack or vent

Aniline 1 Plant Fugitives

Location of stack or vent (see instructions on how to determine location of area sources).

Horizontal coordinate: **692290 mE**
Vertical coordinate: **3340880 mN**
UTM Zone No. **15**

Stack and discharge physical characteristics

Height of stack above grade (ft)

Change Yes No

Diameter (ft) or stack discharge area (ft²)

N/A

Stack gas exit temperature (°F)

N/A

Stack gas flow at process conditions, not at standard (cfm)

N/A

Stack gas exit velocity (ft/sec)

N/A

Date of construction /modification

N/A

Operating rate (max) or tank capacity (gals)

N/A

Type of fuel used and heat input (see instructions)

Type of fuel

a N/A

b

c

Heat input (MMBtu/hr)

N/A

Operating Characteristics

>>

Percent of annual throughput of pollutants through this emission point

Dec-Feb	25	25	25	25
Mar-May	25	25	25	25
Jun-Aug	25	25	25	25
Sep-Nov	25	25	25	25

Normal operating time of this point

hrs/day	24
days/week	7
weeks/year	52

Normal operating rate

N/A

Air Pollutant Specific Information

Pollutant	Control equipment code	Control equipment efficiency %	Emission Rate		Emission estimation method	Add. change, delete code	Concentration in gases exiting at stack
			Average (lbs/hr)	Annual (tons/yr)			
Total VOC (including those listed)	000	0	0.1	0.42	3	C	N/A ppm by vol
Aniline	000	0	0.03	0.14	3	C	N/A ppm by vol
Benzene	000	0	0.02	0.08	3	C	N/A ppm by vol
Mononitrobenzene	000	0	0.04	0.15	3	C	N/A ppm by vol

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Company name

BASF Corporation

Plant location and name (if any)

Aniline 1 and 2 Plants Geismar, LA

Date of submittal

March 2006

Source ID Number

32-97

Descriptive name of the equipment served by this stack or vent

Aniline 2 Plant Fugitives

Location of stack or vent (see instructions on how to determine location of area sources).

Horizontal coordinate: **692261 mE**
Vertical coordinate: **3341851 mN**
UTM Zone No. **15**

Stack and discharge physical characteristics

Change Yes No

Height of stack above grade (ft)

N/A

Diameter (ft) or stack discharge area (ft²)

N/A

Stack gas exit temperature (°F)

N/A

Stack gas flow at process conditions, not at standard (cfm)

N/A

Stack gas exit velocity (ft/sec)

N/A

Date of construction /modification

1998

Operating rate (max) or tank capacity (gals)

N/A

Type of fuel used and heat input (see instructions)

Heat input (MMBtu/hr)

N/A

Operating Characteristics

>>

Percent of annual throughput of pollutants through this emission point

Normal operating time of this point

hrs/day	24
days/week	7
weeks/year	52

Normal operating rate

N/A

Air Pollutant Specific Information

Pollutant	Control equipment code	Control equipment efficiency %	Emission Rate		Emission estimation method	Add, change, delete code	Concentration in gases exiting at stack
			Average (lbs/hr)	Maximum (lbs/hr)			
Total VOC (including those listed)	000	0	0.09	0.09	3		N/A ppm by vol
Aniline	000	0	0.03	0.03	3		N/A ppm by vol
Benzene	000	0	0.02	0.02	3		N/A ppm by vol
Mononitrobenzene	000	0	0.04	0.18	3		N/A ppm by vol

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Company name: **BASF Corporation**
 Plant location and name (if any): **Aniline 1 and 2 Plants Geismar, LA**
 Date of submittal: **March 2006**

Source ID Number: **35-97**
 Descriptive name of the equipment served by this stack or vent: **Aniline 2 Plant Cooling Tower**
 Location of stack or vent (see instructions on how to determine location of area sources):
 Horizontal coordinate: **692230 mE**
 Vertical coordinate: **3341982 mN**
 UTM Zone No. **15**

Stack and discharge physical characteristics
 Change Yes No
 Height of stack above grade (ft): **N/A**
 Diameter (ft) or stack discharge area (ft²): **N/A**
 Stack gas exit temperature (°F): **N/A**
 Stack gas flow at process conditions, not at standard (cfm): **N/A**
 Stack gas exit velocity (ft/sec): **N/A**
 Date of construction/modification: **1998**
 Operating rate (max) or tank capacity (gals): **N/A**

Type of fuel used and heat input (see instructions)
 Type of fuel: **N/A**
 Heat input (MMBtu/hr): **N/A**
 Operating Characteristics: **>>**
 Percent of annual throughput of pollutants through this emission point:
 Dec-Feb: **25** Mar-May: **25** Jun-Aug: **25** Sep-Nov: **25**
 Normal operating time of this point: **7** days/week
 Normal operating rate: **15,000 gpm***

Air Pollutant Specific Information

Pollutant	Control equipment code	Control equipment efficiency %	Emission Rate			Add, change, delete code	Concentration in gases exiting at stack
			Average (lbs/hr)	Maximum (lbs/hr)	Annual (tons/yr)		
PM 10	000	0	0.6	0.6	2.63	3	N/A g/Std ft ³
Chlorine	000	0	0.01	0.01	0.03	3	N/A ppm by vol
Total VOC (including those listed)	000	0	0.03	0.03	0.13	3	N/A ppm by vol
Aniline	000	0	0.03	0.03	0.13	3	N/A ppm by vol

* Cooling water

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Company name

BASF Corporation

Plant location and name (if any)

Aniline 1 and 2 Plants Geismar, LA

Date of submittal

March 2006

Source ID Number

36-97

Descriptive name of the equipment served by this stack or vent

Aniline 2 Plant Flare (Y502)

Location of stack or vent (see instructions on how to determine location of area sources).

Horizontal coordinate: **692070 mE**
 Vertical coordinate: **3342074 mN**
 UTM Zone No. **15**

Stack and discharge physical characteristics

Change Yes No

Height of stack above grade (ft) **100**

Diameter (ft) or stack discharge area (ft²) **0.33 ft**

Stack gas exit temperature (°F) **1,832**

Stack gas flow at process conditions, not at standard (cfm) **190**

Stack gas exit velocity (ft/sec) **37**

Date of construction /modification **1998**

Operating rate (max) or tank capacity (gals) **N/A**

Type of fuel used and heat input (see instructions)

Fuel	Type of fuel	Heat input (MMBtu/hr)
a	Natural gas	0.14
b	Offgas	4.88
c		

Operating Characteristics

>>

Percent of annual throughput of pollutants through this emission point

Dec-Feb		Mar-May		Jun-Aug		Sep-Nov	
25	25	25	25	25	25	25	25

Normal operating time of this point

hrs/day	days/week	weeks/year
24	7	52

Normal operating rate

5.02 MMBtu/hr

Air Pollutant Specific Information

Pollutant	Control equipment code	Control equipment efficiency %	Emission Rate			Emission estimation method	Add, change, delete code	Concentration in gases exiting at stack
			Average (lbs/hr)	Maximum (lbs/hr)	Annual (tons/yr)			
PM 10	000	0	0.04	0.11	0.17	3	C	N/A gr/std ft ³
Sulfur Dioxide	000	0	< 0.001	< 0.001	< 0.01	3	C	N/A ppm by vol
Nitrogen Oxides	000	0	0.34	1.02	1.49	3	C	N/A ppm by vol
Carbon Monoxide	000	0	0.08	0.25	0.36	3	C	N/A ppm by vol
Ammonia	000	98*	0.01	2	0.05	2/6	C	N/A ppm by vol
Total VOC (including those listed)	023	98*	0.16	25.6	0.71	3	C	N/A ppm by vol
Aniline	023	98*	0.12	20	0.52	2/6	C	N/A ppm by vol
Benzene	023	98*	0.03	5.5	0.14	2/6	C	N/A ppm by vol

* Control efficiency applies to reactor purge vent.

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Company name: **BASF Corporation**
 Plant location and name (if any): **Aniline 1 and 2 Plants Geismar, LA**
 Date of submittal: **March 2006**

Source ID Number: **ANI01**
 Descriptive name of the equipment served by this stack or vent: **Aniline 1 Plant Cooling Tower**
 Location of stack or vent (see instructions on how to determine location of area sources):
 Horizontal coordinate: **692290 mE**
 Vertical coordinate: **3340880 mN**
 UTM Zone No. **15**

Stack and discharge physical characteristics:
 Change Yes No
 Height of stack above grade (ft): **20.7**
 Diameter (ft) or stack discharge area (ft²): **15 ft**
 Stack gas exit temperature (°F): **100**
 Stack gas flow at process conditions, not at standard (cfm): **706,984**
 Stack gas exit velocity (ft/sec): **27**
 Date of construction/modification: **1990**
 Operating rate (max) or tank capacity (gals): **N/A**

Type of fuel used and heat input (see instructions):
 Type of fuel: **N/A**
 Heat input (MMBtu/hr): **N/A**

Operating Characteristics: **>>**

Percent of annual throughput of pollutants through this emission point:
 Dec-Feb: **25** Mar-May: **25** Jun-Aug: **25** Sep-Nov: **25**
 Normal operating time of this point:
 hrs/day: **24** days/week: **7** weeks/year: **52**
 Normal operating rate: **15,000 gpm***

Air Pollutant Specific Information

Pollutant	Control equipment code	Control equipment efficiency %	Emission Rate		Emission estimation method	Add, change, delete code	Concentration in gases exiting at stack
			Average (lbs/hr)	Annual (tons/yr)			
PM 10	000	0	0.75	3.29	3		N/A gr/std ft ³
Chlorine	000	0	0.01	0.03	3		N/A ppm by vol
Total VOC (including those listed)	000	0	0.03	0.13	3		N/A ppm by vol
Aniline	000	0	0.03	0.13	3		N/A ppm by vol

* Cooling water

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Company name: **BASF Corporation**
Plant location and name (if any): **Aniline 1 and 2 Plants Geismar, LA**
Date of submittal: **March 2006**

Source ID Number: **ANI02**
Descriptive name of the equipment served by this stack or vent: **Aniline 1 Plant Flare (Y503)**
Location of stack or vent (see instructions on how to determine location of area sources):
Horizontal coordinate: **692290 mE**
Vertical coordinate: **3340880 mN**
UTM Zone No. **15**

Stack and discharge physical characteristics:
Change Yes No
Height of stack above grade (ft): **79**
Diameter (ft) or stack discharge area (ft²): **0.67 ft**
Stack gas exit temperature (°F): **1,832**
Stack gas flow at process conditions, not at standard (cfm): **332**
Stack gas exit velocity (ft/sec): **16**
Date of construction/modification: **2005**
Operating rate (max) or tank capacity (gals): **N/A**

Fuel	Type of fuel		Heat input (MMBtu/hr)	Operating Characteristics	Percent of annual throughput of pollutants through this emission point				Normal operating time of this point		Normal operating rate	
	a	b			Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	hrs/day	days/week		weeks/year
>>	Offgas		4.88	>>	25	25	25	25	24	7	52	5.02 MMBtu/hr
	Natural gas		0.14									

Air Pollutant Specific Information

Pollutant	Control equipment code	Control equipment efficiency %	Emission Rate		Emission estimation method	Add, change, delete code	Concentration in gases exiting at stack
			Average (lbs/hr)	Maximum (lbs/hr)			
PM 10	000	0	0.04	0.11	3		N/A gr/std ft ³
Sulfur Dioxide	000	0	< 0.001	< 0.01	3		N/A ppm by vol
Nitrogen Oxides	000	0	0.34	1.02	3		N/A ppm by vol
Carbon Monoxide	000	0	0.08	0.25	3		N/A ppm by vol
Ammonia	023	98*	0.01	2	2/6		N/A ppm by vol
Total VOC (including those listed)	023	98*	0.16	25.6	2/3/6		N/A ppm by vol
Aniline	023	98*	0.12	20	2/6		N/A ppm by vol
Benzene	023	98*	0.03	5.5	2/6		N/A ppm by vol

* Control efficiency applies to reactor purge vent.

Department of Environmental Quality
Office of Environmental Services
Permits Division
P.O. Box 4313
Baton Rouge, LA 70821-4313
(225) 219-3181

LOUISIANA

SINGLE POINT SOURCE / AREA SOURCE
Emission Inventory Questionnaire (EIQ)
for Air Pollutants



Company name

BASF Corporation

Plant location and name (if any)

Aniline 1 and 2 Plants Geismar, LA

Date of submittal

March 2006

Source ID Number

ANI03

Descriptive name of the equipment served by this stack or vent

Aniline 1 Plant Cooling Tower 2

Location of stack or vent (see instructions on how to determine location of area sources).

Horizontal coordinate: **692290 mE**

Vertical coordinate: **3341851 mN**

UTM Zone No. **15**

Stack and discharge physical characteristics

Change Yes No

Height of stack above grade (ft)

N/A

Diameter (ft) or stack discharge area (ft²)

N/A

Stack gas exit temperature (°F)

N/A

Stack gas flow at process conditions, not at standard (cfm)

N/A

Stack gas exit velocity (ft/sec)

N/A

Date of construction /modification

N/A

Operating rate (max) or tank capacity (gals)

N/A

Type of fuel used and heat input (see instructions)

Type of fuel

Heat input (MMBtu/hr)

N/A

Fuel

a N/A

b

c

Operating Characteristics

>>

Percent of annual throughput of pollutants through this emission point

Dec-Feb

25

Mar-May

25

Jun-Aug

25

Sep-Nov

25

Normal operating time of this point

hrs/day

24

days/week

7

weeks/year

52

Normal operating rate

5,000 gpm*

Air Pollutant Specific Information

Pollutant	Control equipment code	Control equipment efficiency %	Emission Rate			Add, change, delete code	Concentration in gases exiting at stack
			Average (lbs/hr)	Maximum (lbs/hr)	Annual (tons/yr)		
PM 10	000	0	0.05	0.05	0.11	A	N/A gr/std ft ³
Chlorine	000	0	0.004	0.004	0.01	A	N/A ppm by vol
Total VOC (including those listed)	000	0	0.01	0.01	0.02	A	N/A ppm by vol

* Cooling water

ANNUAL EMISSIONS RATE

**ANILINE 1 and 2 PLANTS
BASF CORPORATION, AI NO. 2049
GEISMAR, ASCENSION PARISH, LOUISIANA**

Emission Point **Permitted Emission Rates are Listed in Tons per Year**

	PM ₁₀	SO ₂	NO _x	CO	VOC*	Ammonia
10-90	-	-	-	-	-	-
11-90	-	-	-	-	-	-
12-90	0.91	0.02	21.84	10.15	0.83	<0.01
13-90	-	-	4.29	-	0.92	-
14-90	0.15	0.01	10.32	7.19	2.94	0.02
15-90	-	-	-	-	0.42	-
32-97	-	-	-	-	0.39	-
35-97	2.63	-	-	-	0.13	-
36-97	0.17	<0.01	1.49	0.36	0.71	0.05
ANI01	3.29	-	-	-	0.13	-
ANI02	0.17	<0.01	1.49	0.36	0.71	0.05
ANI03	0.11	-	-	-	0.02	-
Total	7.43	0.03	39.43	18.06	7.20	0.12

*Toxic Air Pollutant(TPY):

Aniline	2.49
Benzene	1.81
Formaldehyde	0.02
n-Hexane	0.09
Chlorine	0.07
Hydrochloric Acid	0.07
Nitric Acid	0.01
Mononitrobenzene	0.56
Sulfuric Acid	0.01
Total	5.13

EMISSION POINT LIST

ANILINE 1 and 2 PLANTS
BASF CORPORATION, AI NO. 2049
GEISMAR, ASCENSION PARISH, LOUISIANA

General Condition XVII Activities

Activity	Frequency	Pollutant	TPY
Startup/Shutdown Events Aniline Reactor Shutdown		PM ₁₀	0.06
Equipment Preparation and Maintenance Maintenance		VOC	0.05

Insignificant Activities:

<u>ID No.:</u>	<u>Description</u>	<u>Capacity</u>	<u>Citation</u>
TK-545	Incinerator Scrubber Water Tank	250 gal	LAC 33:III.501.B.5.A.3
-	Analyzer House vents		LAC 33:III.501.B.5.A.6
-	Reactor Catalyst	55 tons/yr	LAC 33:III.501.B.5.A.11
-	Ozone Destruct Catalyst	2 tons/yr	LAC 33:III.501.B.5.A.11
-	Noncommercial water washing of empty drums (Sokalan)	4200 drums/yr	LAC 33:III.501.B.5.A.7